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ESSAYS

ON THE

INTELLECTUAL POWERS

OF MAN.

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PROFESSOR OF MORAL PHILOSOPHY
IN THE UNIVERSITY OF GLASGOW.

Who hath put wiſdom in the inward parts? JOB.

VOL. I.

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TO

Mr. DUGALD STEWART,

LATELY

PROFESSOR OF MATHEMATICS,

NOW

PROFESSOR OF MORAL PHILOSOPHY,

AND

Dr. JAMES GREGORY,

PROFESSOR OF THE THEORY OF PHYSIC,

In the Univerſity of Edinburgh.

My dear Friends,

I KNOW not to whom I can addreſs theſe Eſſays with more propriety than to You; not only on account of a friendſhip begun in early life on your part, though in old age on mine, and in one of you I may ſay hereditary; nor yet on account of that correſpondence in our literary purſuits and amuſements, which has always given me ſo great pleaſure; but becauſe, if theſe Eſſays have any merit, you have a conſiderable ſhare in it, having not only encouraged me to hope that they may be uſeful, but favoured me with your obſervations on every part of them, both before they were ſent to the Preſs and while they were under it.

I have availed myſelf of your obſervations, ſo as to correct many faults that might otherwiſe have eſcaped me; and I have a very grateful ſenſe of your friendſhip, in giving this aid to one, who ſtood much in need of it; having no ſhame, but much pleaſure, in being inſtructed by thoſe who formerly were my pupils, as one of you was.

It would be ingratitude to a man whoſe memory I moſt highly reſpect, not to mention my obligations to the late Lord KAMES for the concern he was pleaſed to take in this Work. Having ſeen a ſmall part of it, he urged me to carry it on; took account of my progreſs from time to time; reviſed it more than once, as far as it was carried, before his death; and gave me his obſervations on it, both with reſpect to the matter and the expreſſion. On ſome points we differed in opinion, and debated them keenly, both in converſation and by many letters, without any abatement of his affection, or of his zeal for the Work's being carried on and publiſhed: For he had too much liberality of mind not to allow to others the ſame liberty in judging which he claimed to himſelf.

It is difficult to ſay whether that worthy man was more eminent in active life or in ſpeculation. Very rare, ſurely, have been the inſtances where the talents for both were united in ſo eminent a degree.

His

His genius and induſtry, in many different branches of literature, will, by his works, be known to poſterity: His private virtues, and public ſpirit, his aſſiduity, through a long and laborious life, in many honourable public offices with which he was entruſted, and his zeal to encourage and promote every thing that tended to the improvement of his country in laws, literature, commerce, manufactures and agriculture, are beſt known to his friends and cotemporaries.

The favourable opinion which He, and You my Friends, were pleaſed to expreſs of this Work, has been my chief encouragement to lay it before the Public; and perhaps, without that encouragement, it had never ſeen the light: For I have always found, that, without ſocial intercourſe, even a favourite ſpeculation languiſhes; and that we cannot help thinking the better of our own opinions when they are approved by thoſe whom we eſteem good judges.

You know that the ſubſtance of theſe Eſſays was delivered annually, for more than twenty years, in Lectures to a large body of the more advanced ſtudents in this Univerſity, and for ſeveral years before, in another Univerſity. Thoſe who heard me with attention, of whom I preſume there are ſome hundreds alive, will recogniſe the doctrine which they heard, ſome of them thirty years ago, delivered to them more

more diffuſely, and with the repetitions and illuſtrations proper for ſuch audiences.

I am afraid, indeed, that the more intelligent reader, who is converſant in ſuch abſtract ſubjects, may think that there are repetitions ſtill left, which might be ſpared. Such, I hope, will conſider, that what to one reader s a ſuperfluous repetition, to the greater part, leſs converſant in ſuch ſubjects, may be very uſeful. If this apology be deemed inſufficient, and be thought to be the dictate of lazineſs, I claim ſome indulgence even for that lazineſs, at my period of life.

You who are in the prime of life, with the vigour which it inſpires, will, I hope, make more happy advances in this or in any other branch of ſcience to which your talents may be applied.

GLASGOW-COLLEGE, June 1. 1785.

THO. REID.

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PREFACE.

HUMAN knowledge may be reduced to two general heads, according as it relates to body, or to mind; to things material, or to things intellectual.

The whole ſyſtem of bodies in the Univerſe, of which we know but a very ſmall part, may be called the Material World; the whole ſyſtem of minds, from the infinite Creator to the meaneſt creature endowed with thought, may be called the Intellectual World. Theſe are the two great kingdoms of nature that fall within our notice; and about the one, or the other, or things pertaining to them, every art, every ſcience, and every human thought is employed; nor can the boldeſt flight of imagination carry us beyond their limits.

Many things there are indeed regarding the nature and the ſtructure both of body and of mind, which our faculties cannot reach; many difficulties which the ableſt Philoſopher cannot reſolve; but of other natures, if any other there be, we have no knowledge, no conception at all.

That

That every thing that exiſts muſt be either corporeal or incorporeal, is evident. But it is not ſo evident, that every thing that exiſts muſt be either corporeal, or endowed with thought. Whether there be in the Univerſe, beings, which are neither extended, ſolid and inert, like body, nor active and intelligent, like mind, ſeems to be beyond the reach of our knowledge. There appears to be a vaſt interval between body and mind, and whether there be any intermediatenat ure that connects them together, we know not.

We have no reaſon to aſcribe intelligence, or even ſenſation, to plants; yet there appears in them an active force and energy, which cannot be the reſult of any arrangement or combination of inert matter. The ſame thing may be ſaid of thoſe powers by which animals are nouriſhed and grow, by which matter gravitates, by which magnetical and electrical bodies attract and repel each other, and by which the parts of ſolid bodies cohere.

Some have conjectured that the phænomena of the material world which require active force, are produced by the continual operation of intelligent beings: Others have conjectured, that there may be in the Univerſe, beings that are active without intelligence, which, as a kind of incorporeal machinery, contrived by the ſupreme Wiſdom, perform their deſtined taſk without any knowledge or intention. But, laying aſide conjecture, and all pretences to determine in things beyond our reach, we muſt reſt in this, that body and mind are the only kinds of being of which we can have any knowledge,

ledge, or can form any conception. If there are other kinds, they are not discoverable by the faculties which God hath given us; and, with regard to us, are as if they were not.

As therefore all our knowledge is confined to body and mind, or things belonging to them, there are two great branches of philosophy, one relating to body, the other to mind. The properties of body, and the laws that obtain in the material system, are the objects of natural philosophy, as that word is now used. The branch which treats of the nature and operations of minds, has by some been called Pneumatology. And to the one or the other of these branches, the principles of all the sciences belong.

What variety there may be of minds or thinking beings throughout this vast Universe, we cannot pretend to say. We dwell in a little corner of God's dominion, disjoined from the rest of it. The globe which we inhabit is but one of seven planets that encircle our sun. What various orders of beings may inhabit the other six, their secondaries, and the comets belonging to our system; and how many other suns may be encircled with like systems, are things altogether hid from us. Although human reason and industry have discovered with great accuracy the order and distances of the planets, and the laws of their motion, we have no means of corresponding with them. That they may be the habitation of animated beings is very probable; but of the nature, or powers of their inhabitants, we are perfectly ignorant. Every man is conscious of a thinking principle

principle or mind in himſelf, and we have ſufficient evidence of a like principle in other men. The actions of brute animals ſhow that they have ſome thinking principle, though of a nature far inferior to the human mind. And every thing about us may convince us of the exiſtence of a ſupreme mind, the Maker and Governor of the Univerſe. Theſe are all the minds of which reaſon can give us any certain knowledge.

The mind of man is the nobleſt work of God which reaſon diſcovers to us, and therefore, on account of its dignity, deſerves our ſtudy. It muſt indeed be acknowledged, that although it is of all objects the neareſt to us, and ſeems the moſt within our reach, it is very difficult to attend to its operations ſo as to form a diſtinct notion of them; and on that account there is no branch of knowledge in which the ingenious and ſpeculative have fallen into ſo great errors, and even abſurdities. Theſe errors and abſurdities have given riſe to a general prejudice againſt all enquiries of this nature. Becauſe, ingenious men have, for many ages, given different and contradictory accounts of the powers of the mind, it is concluded, that all ſpeculations concerning them are chimerical and viſionary.

But whatever effect this prejudice may have with ſuperficial thinkers, the judicious will not be apt to be carried away with it. About two hundred years ago, the opinions of men in natural philoſophy were as various, and as contradictory, as they are now concerning the powers of the mind. GALILEO, TORRICELLI, KEPLER, BACON, and NEWTON, had the ſame diſcouragement in their attempts to throw light upon

upon the material ſyſtem, as we have with regard to the intellectual. If they had been deterred by ſuch prejudices, we ſhould never have reaped the benefit of their diſcoveries, which do honour to human nature, and will make their names immortal. The motto which Lord BACON prefixed to ſome of his writings was worthy of his genius, *Inveniam viam aut faciam.*

There is a natural order in the progreſs of the ſciences, and good reaſons may be aſſigned why the philoſophy of body ſhould be *elder ſiſter* to that of mind, and of a quicker growth; but the laſt hath the principles of life no leſs than the firſt, and will grow up, though ſlowly, to maturity. The remains of ancient philoſophy upon this ſubject, are venerable ruins, carrying the marks of genius and induſtry, ſufficient to inflame, but not to ſatisfy, our curioſity. In later ages, DES CARTES was the firſt that pointed out the road we ought to take in thoſe dark regions. MALEBRANCHE, ARNAULD, LOCKE, BERKELEY, BUFFIER, HUTCHESON, BUTLER, HUME, PRICE, Lord KAMES, have laboured to make diſcoveries; nor have they laboured in vain. For, however different and contrary their concluſions are, however ſceptical ſome of them, they have all given new light, and cleared the way to thoſe who ſhall come after them.

We ought never to deſpair of human genius, but rather to hope, that, in time, it may produce a ſyſtem of the powers and operations of the human mind, no leſs certain than thoſe of optics or aſtronomy.

This

This is the more devoutly to be wiſhed, that a diſtinct knowledge of the powers of the mind would undoubtedly give great light to many other branches of ſcience. Mr. HUME hath juſtly obſerved, that "all the ſciences have a "relation to human nature; and, however "wide any of them may ſeem to run from it, "they ſtill return back by one paſſage or ano-"ther. This is the centre and capital of the "ſciences, which being once maſters of, we "may eaſily extend our conqueſts every "where."

The faculties of our minds are the tools and engines we muſt uſe in every diſquiſition; and the better we underſtand their nature and force, the more ſucceſsfully we ſhall be able to apply them. Mr. LOCKE gives this account of the occaſion of his entering upon his Eſſay concerning human underſtanding: "Five or ſix friends (ſays he) meeting at my "chamber, and diſcourſing on a ſubject very "remote from this, found themſelves quickly "at a ſtand, by the difficulties that roſe on "every ſide. After we had for a while puz-"zled ourſelves, without coming any nearer "to a reſolution of thoſe doubts that perplexed "us, it came into my thoughts that we took "a wrong courſe; and that, before we ſet "ourſelves upon enquiries of that nature, it "was neceſſary to examine our own abilities, "and ſee what objects our underſtandings "were fitted or not fitted to deal with. This "I propoſed to the company, who all readily "aſſented; and thereupon it was agreed that "this ſhould be our firſt Enquiry." If this be commonly the cauſe of perplexity in thoſe diſqui-

diſquiſitions which have leaſt relation to the mind, it muſt be ſo much more in thoſe that have an immediate connection with it.

The ſciences may be diſtinguiſhed into two claſſes, according as they pertain to the material or to the intellectual world. The various parts of Natural Philoſophy, the mechanical Arts, Chemiſtry, Medicine, and Agriculture, belong to the firſt; but, to the laſt, belong Grammar, Logic, Rhetoric, Natural Theology; Morals, Juriſprudence, Law, Politics, and the fine Arts. The knowledge of the human mind is the root from which theſe grow, and draw their nouriſhment. Whether therefore we conſider the dignity of this ſubject, or its ſubſerviency to ſcience in general, and to the nobleſt branches of ſcience in particular, it highly deſerves to be cultivated.

A very elegant writer, on the *ſublime and beautiful*, concludes his account of the paſſion thus: The variety of the paſſions is great, and "worthy, in every branch of that variety, of "the moſt diligent inveſtigation. The more "accurately we ſearch into the human mind, "the ſtronger traces we every where find of "his wiſdom who made it. If a diſcourſe on "the uſe of the parts of the body may be con-"ſidered as a hymn to the Creator; the uſe "of the paſſions, which are the organs of the "mind, cannot be barren of praiſe to him, "nor unproductive to ourſelves of that noble "and uncommon union of ſcience and admi-"ration, which a contemplation of the works "of infinite Wiſdom alone can afford to a ra-"tional mind; whilſt referring to him whate-"ver

" ver we find of right, or good, or fair, in
" ourſelves, diſcovering his ſtrength and wiſ-
" dom even in our own weakneſs and imper-
" fection, honouring them where we diſcover
" them clearly, and adoring their profundity
" where we are loſt in our ſearch, we may be
" inquiſitive without impertinence, and eleva-
" ted without pride; we may be admitted, if
" I may dare to ſay ſo, into the counſels of the
" Almighty, by a conſideration of his works.
" This elevation of the mind ought to be the
" principal end of all our ſtudies, which, if
" they do not in ſome meaſure effect, they are
" of very little ſervice to us."

ESSAYS

ESSAYS

ON THE

INTELLECTUAL POWERS OF MAN.

ESSAY I.

PRELIMINARY.

CHAP. I.

Explication of Words.

THERE is no greater impediment to the advancement of knowledge than the ambiguity of words. To this chiefly it is owing that we find ſects and parties in moſt branches of ſcience; and diſputes, which are carried on from age to age, without being brought to an iſſue. CHAP. I.

Sophiſtry has been more effectually excluded from mathematics and natural philoſophy than from other ſciences. In mathematics it had no place from the beginning: Mathematicians having had the wiſdom to define accurately the terms they uſe, and to lay down, as axioms, the firſt principles on which their reaſoning is grounded. Accordingly we find no parties among mathematicians, and hardly any diſputes.

CHAP. I.

In natural philoſophy, there was no leſs ſophiſtry, no leſs diſpute and uncertainty, than in other ſciences, until about a century and a half ago, this ſcience began to be built upon the foundation of clear definitions and ſelf-evident axioms. Since that time, the ſcience, as if watered with the dew of Heaven, hath grown apace; diſputes have ceaſed, truth hath prevailed, and the ſcience hath received greater increaſe in two centuries than in two thouſand years before.

It were to be wiſhed, that this method, which hath been ſo ſucceſsful in thoſe branches of ſcience, were attempted in others: For definitions and axioms are the foundations of all ſcience. But that definitions may not be ſought, where no definition can be given, nor logical definitions be attempted, where the ſubject does not admit of them, it may be proper to lay down ſome general principles concerning definition, for the ſake of thoſe who are leſs converſant in this branch of logic.

When one undertakes to explain any art or ſcience, he will have occaſion to uſe many words that are common to all who uſe the ſame language, and ſome that are peculiar to that art or ſcience. Words of the laſt kind are called *terms of the art*, and ought to be diſtinctly explained, that their meaning may be underſtood.

A definition is nothing elſe but an explication of the meaning of a word, by words whoſe meaning is already known. Hence it is evident, that every word cannot be defined; for the definition muſt conſiſt of words; and there could be no definition, if there were not words previouſly underſtood without definition. Common words, therefore, ought to be uſed in their common acceptation; and, when they have different acceptations

acceptations in common language, theſe, when it is neceſſary, ought to be diſtinguiſhed. But they require no definition. It is ſufficient to define words that are uncommon, or that are uſed in an uncommon meaning.

It may farther be obſerved, that there are many words, which, though they may need explication, cannot be logically defined. A logical definition, that is, a ſtrict and proper definition, muſt expreſs the kind of the thing defined, and the ſpecific difference, by which the ſpecies defined, is diſtinguiſhed from every other ſpecies belonging to that kind. It is natural to the mind of man to claſs things under various kinds, and again to ſubdivide every kind into its various ſpecies. A ſpecies may often be ſubdivided into ſubordinate ſpecies, and then it is conſidered as a kind.

From what has been ſaid of logical definition, it is evident, that no word can be logically defined which does not denote a ſpecies; becauſe ſuch things only can have a ſpecific difference; and a ſpecific difference is eſſential to a logical definition. On this account there can be no logical definition of individual things, ſuch as London or Paris. Individuals are diſtinguiſhed either by proper names, or by accidental circumſtances of time or place; but they have no ſpecific difference; and therefore, though they may be known by proper names, or may be deſcribed by circumſtances or relations, they cannot be defined. It is no leſs evident, that the moſt general words cannot be logically defined, becauſe there is not a more general term, of which they are a ſpecies.

Nay, we cannot define every ſpecies of things, becauſe it happens ſometimes that we have not

CHAP. I.

words to expreſs the ſpecific difference. Thus a ſcarlet colour is, no doubt, a ſpecies of colour; but how ſhall we expreſs the ſpecific difference by which ſcarlet is diſtinguiſhed from green or blue? The difference of them is immediately perceived by the eye; but we have not words to expreſs it. Theſe things we are taught by logic.

Without having recourſe to the principles of logic, we may eaſily be ſatisfied that words cannot be defined, which ſignify things perfectly ſimple, and void of all compoſition. This obſervation, I think, was firſt made by DES CARTES, and afterwards more fully illuſtrated by LOCKE. And however obvious it appears to be, many inſtances may be given of great philoſophers who have perplexed and darkened the ſubjects they have treated, by not knowing, or not attending to it.

When men attempt to define things which cannot be defined, their definitions will always be either obſcure or falſe. It was one of the capital defects of ARISTOTLE's philoſophy, that he pretended to define the ſimpleſt things, which neither can be, nor need to be defined; ſuch as *time* and *motion*. Among modern philoſophers, I know none that has abuſed definition ſo much as CAROLUS WOLFIUS, the famous German philoſopher, who, in a work on the human mind, called *Pſychologia Empirica*, conſiſting of many hundred propoſitions, fortified by demonſtrations, with a proportional accompaniment of definitions, corollaries, and ſcholia has given ſo many definitions of things, which cannot be defined, and ſo many demonſtrations of things ſelf-evident, that the greateſt part of the work conſiſts of tautology, and ringing changes upon words.

There

There is no ſubject in which there is more frequent occaſion to uſe words that cannot be logically defined, than in treating of the powers and operations of the mind. The ſimpleſt operations of our minds muſt all be expreſſed by words of this kind. No man can explain by a logical definition what it is to think, to apprehend, to believe, to will, to deſire. Every man who underſtands the language has ſome notion of the meaning of thoſe words; and every man, who is capable of reflection, may, by attending to the operations of his own mind, which are ſignified by them, form a clear and diſtinct notion of them; but they cannot be logically defined. CHAP. I.

Since therefore it is often impoſſible to define words which we muſt uſe on this ſubject, we muſt as much as poſſible uſe common words, in their common acceptation, pointing out their various ſenſes where they are ambiguous; and when we are obliged to uſe words leſs common, we muſt endeavour to explain them as well as we can, without affecting to give logical definitions, when the nature of the thing does not allow it.

The following obſervations on the meaning of certain words are intended to ſupply, as far as we can, the want of definitions, by preventing ambiguity or obſcurity in the uſe of them.

1. By the *mind* of a man, we underſtand that in him which thinks, remembers, reaſons, wills. The eſſence both of body and of mind is unknown to us. We know certain properties of the firſt, and certain operations of the laſt, and by theſe only we can define or deſcribe them.

We define body to be that which is extended, ſolid, moveable, diviſible. In like manner, we define

CHAP. I.

define mind to be that which thinks. We are conſcious that we think, and that we have a variety of thoughts of different kinds; ſuch as ſeeing, hearing, remembering, deliberating, reſolving, loving, hating, and many other kinds of thought, all which we are taught by nature to attribute to one internal principle; and this principle of thought we call the *mind* or *ſoul* of a man.

2. By the *operations* of the mind, we underſtand every mode of thinking of which we are conſcious.

It deſerves our notice, that the various modes of thinking have always, and in all languages, as far as we know, been called by the name of Operations of the mind, or by names of the ſame import. To body we aſcribe various properties, but not operations, properly ſo called; it is extended, diviſible, moveable, inert; it continues in any ſtate in which it is put; every change of its ſtate is the effect of ſome force impreſſed upon it, and is exactly proportional to the force impreſſed, and in the preciſe direction of that force. Theſe are the general properties of matter, and theſe are not operations; on the contrary, they all imply its being a dead inactive thing, which moves only as it is moved, and acts only by being acted upon.

But the mind is from its very nature a living and active being. Every thing we know of it implies life and active energy; and the reaſon why all its modes of thinking are called its operations, is, that in all, or in moſt of them, it is not merely paſſive as body is, but is really and properly active.

In all ages, and in all languages, ancient and modern, the various modes of thinking have been

been expreſſed by words of active ſignification, ſuch as ſeeing, hearing, reaſoning, willing, and the like. It ſeems therefore to be the natural judgment of mankind, that the mind is active in its various ways of thinking; and for this reaſon they are called its operations, and are expreſſed by active verbs.

It may be made a queſtion, What regard is to be paid to this natural judgment? may it not be a vulgar error? Philoſophers who think ſo, have, no doubt, a right to be heard. But until it is proved that the mind is not active in thinking, but merely paſſive, the common language with regard to its operations ought to be uſed, and ought not to give place to a phraſeology invented by Philoſophers, which implies its being merely paſſive.

3. The words *power* and *faculty*, which are often uſed in ſpeaking of the mind, need little explication. Every operation ſuppoſes a power in the being that operates, for to ſuppoſe any thing to operate, which has no power to operate, is manifeſtly abſurd. But, on the other hand, there is no abſurdity in ſuppoſing a being to have power to operate, when it does not operate. Thus I may have power to walk, when I ſit; or to ſpeak, when I am ſilent. Every operation therefore implies power; but the power does not imply the operation.

The *faculties* of the mind, and its *powers*, are often uſed as ſynonimous expreſſions. But as moſt ſynonimes have ſome minute diſtinction that deſerves notice, I apprehend that the word *faculty* is moſt properly applied to thoſe powers of the mind which are original and natural, and which make a part of the conſtitution of the mind. There are other powers which are acquired

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quired by uſe, exerciſe or ſtudy, which are not called faculties, but *habits*. There muſt be ſomething in the conſtitution of the mind neceſſary to our being able to acquire habits, and this is commonly called *capacity*.

4. We frequently meet with a diſtinction in writers upon this ſubject, between things *in the mind*, and things *external* to the mind. The powers, faculties, and operations of the mind, are things in the mind. Every thing is ſaid to be in the mind, of which the mind is the *ſubject*. It is ſelf-evident, that there are ſome things which cannot exiſt without a ſubject to which they belong, and of which they are attributes. Thus colour muſt be in ſomething coloured; figure in ſomething figured; thought can only be in ſomething that thinks; wiſdom and virtue cannot exiſt but in ſome being that is wiſe and virtuous. When therefore we ſpeak of things in the mind, we underſtand by this, things of which the mind is the ſubject. Excepting the mind itſelf, and things in the mind, all other things are ſaid to be external. It ought therefore to be remembered, that this diſtinction between things in the mind, and things external, is not meant to ſignify the place of the things we ſpeak of, but their ſubject.

There is a figurative ſenſe in which things are ſaid to be in the mind, which it is ſufficient barely to mention. We ſay ſuch a thing was not in my mind, meaning no more than that I had not the leaſt thought of it. By a figure, we put the thing for the thought of it. In this ſenſe external things, are in the mind as often as they are the objects of our thought.

5. *Thinking* is a very general word, which includes all the operations of our minds, and is ſo well underſtood as to need no definition.

To

To *perceive*, to *remember*, to be *conſcious*, and to *conceive* or *imagine*, are words common to Philoſophers, and to the vulgar. They ſignify different operations of the mind, which are diſtinguiſhed in all languages, and by all men that think. I ſhall endeavour to uſe them in their moſt common and proper acceptation, and I think they are hardly capable of ſtrict definition. But as ſome Philoſophers, in treating of the mind, have taken the liberty to uſe them very improperly, ſo as to corrupt the Engliſh language, and to confound things, which the common underſtanding of mankind hath always led them to diſtinguiſh, I ſhall make ſome obſervations on the meaning of them, that may prevent ambiguity or confuſion in the uſe of them.

6. *Firſt*, We are never ſaid to *perceive* things, of the exiſtence of which we have not a full conviction. I may *conceive* or *imagine* a mountain of gold, or a winged horſe; but no man ſays that he perceives ſuch a creature of imagination. Thus *perception* is diſtinguiſhed from *conception* or imagination. *Secondly*, Perception is applied only to external objects, not to thoſe that are in the mind itſelf. When I am pained, I do not ſay that I perceive pain, but that I feel it, or that I am conſcious of it. Thus *perception* is diſtinguiſhed from *conſciouſneſs*. *Thirdly*, The immediate object of perception muſt be ſomething preſent, and not what is paſt. We may remember what is paſt, but do not perceive it. I may ſay, I perceive ſuch a perſon has had the ſmall-pox; but this phraſe is figurative, although the figure is ſo familiar that it is not obſerved. The meaning of it is, that I perceive the pits in his face, which are certain ſigns of his

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his having had the ſmall-pox. We ſay we perceive the thing ſignified, when we only perceive the ſign. But when the word *perception* is uſed properly, and without any figure, it is never applied to things paſt. And thus it is diſtinguiſhed from *remembrance*.

In a word, perception is moſt properly applied to the evidence which we have of external objects by our ſenſes. But as this is a very clear and cogent kind of evidence, the word is often applied by analogy to the evidence of reaſon or of teſtimony, when it is clear and cogent. The perception of external objects by our ſenſes, is an operation of the mind of a peculiar nature, and ought to have a name appropriated to it. It has ſo in all languages. And, in Engliſh, I know no word more proper to expreſs this act of the mind than perception. Seeing, hearing, ſmelling, taſting, and touching or feeling, are words that expreſs the operations proper to each ſenſe; perceiving expreſſes that which is common to them all.

The obſervations made on this word would have been unneceſſary, if it had not been ſo much abuſed in philoſophical writings upon the mind; for, in other writings, it has no obſcurity. Although this abuſe is not chargeable on Mr. HUME only, yet I think he has carried it to the higheſt pitch. The firſt ſentence of his Treatiſe of human nature runs thus: "All the perceptions of the human mind reſolve "themſelves into two diſtinct heads, which "I ſhall call impreſſions and ideas." He adds a little after, that, under the name of impreſſions, he comprehends all our ſenſations, paſſions, and emotions. Here we learn, that our paſſions and emotions are perceptions. I believe, no Engliſh writer before him ever gave the name of

of a perception to any paſſion or emotion. When a man is angry, we muſt ſay that he has the perception of anger. When he is in love, that he has the perception of love. He ſpeaks often of the perceptions of memory, and of the perceptions of imagination; and he might as well ſpeak of the hearing of ſight, or of the ſmelling of touch: For, ſurely, hearing is not more different from ſight, or ſmelling from touch, than perceiving is from remembering or imagining.

7. *Conſciouſneſs* is a word uſed by Philoſophers, to ſignify that immediate knowledge which we have of our preſent thoughts and purpoſes, and, in general, of all the preſent operations of our minds. Whence we may obſerve, that conſciouſneſs is only of things preſent. To apply conſciouſneſs to things paſt, which ſometimes is done in popular diſcourſe, is to confound conſciouſneſs with memory; and all ſuch confuſion of words ought to be avoided in philoſophical diſcourſe. It is likewiſe to be obſerved, that conſciouſneſs is only of things in the mind, and not of external things. It is improper to ſay I am conſcious of the table which is before me. I perceive it, I ſee it, but do not ſay I am conſcious of it. As that conſciouſneſs by which we have a knowledge of the operations of our own minds, is a different power from that by which we perceive external objects, and as theſe different powers have different names in our language, and, I believe, in all languages, a Philoſopher ought carefully to preſerve this diſtinction, and never to confound things ſo different in their nature.

8. *Conceiving*, *imagining*, and *apprehending*, are commonly uſed as ſynonymous in our language,

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guage, and ſignify the ſame thing which the Logicians call ſimple apprehenſion. This is an operation of the mind different from all thoſe we have mentioned. Whatever we perceive, whatever we remember, whatever we are conſcious of, we have a full perſuaſion or conviction of its exiſtence. But we may conceive or imagine what has no exiſtence, and what we firmly believe to have no exiſtence. What never had an exiſtence cannot be remembered; what has no exiſtence *at preſent* cannot be the object of perception or of conſciouſneſs; but what never had, nor has any exiſtence, may be conceived. Every man knows that it is as eaſy to conceive a winged horſe or a centaur, as it is to conceive a horſe or a man. Let it be obſerved therefore, that to *conceive*, to *imagine*, to *apprehend*, when taken in the proper ſenſe, ſignify an act of the mind which implies no belief or judgment at all. It is an act of the mind by which nothing is affirmed or denied, and which therefore can neither be true nor falſe.

But there is another and a very different meaning of thoſe words, ſo common and ſo well authoriſed in language, that it cannot eaſily be avoided; and on that account we ought to be the more on our guard, that we be not miſled by the ambiguity. Politeneſs and good-breeding lead men, on moſt occaſions, to expreſs their opinions with modeſty, eſpecially when they differ from others whom they ought to reſpect. Therefore, when we would expreſs our opinion modeſtly, inſtead of ſaying, "This is my opinion," or, 'this is my judgment," which has the air of dogmaticalneſs, we ſay, "I conceive it to be thus, I imagine or apprehend it to be thus;" which is underſtood as a modeſt declaration of our judgment. In like manner, when any thing is

is ſaid which we take to be impoſſible, we ſay, "We cannot conceive it," meaning, that we cannot believe it.

Thus we ſee that the words *conceive*, *imagine*, *apprehend*, have two meanings, and are uſed to expreſs two operations of the mind, which ought never to be confounded. Sometimes they expreſs ſimple apprehenſion, which implies no judgment at all; ſometimes they expreſs judgment or opinion. This ambiguity ought to be attended to, that we may not impoſe upon ourſelves or others in the uſe of them. The ambiguity is indeed remedied in a great meaſure by their conſtruction. When they are uſed to expreſs ſimple apprehenſion, they are followed by a noun in the *accuſative caſe*, which ſignifies the object conceived. But when they are uſed to expreſs opinion or judgment, they are commonly followed by a verb in the *infinitive mood*. "I conceive an Egyptian pyramid." This implies no judgment. "I conceive the Egyptian "pyramids to be the moſt ancient monuments "of human art." This implies judgment. When the words are uſed in the laſt ſenſe, the thing conceived muſt be a propoſition, becauſe judgment cannot be expreſſed but by a propoſition. When they are uſed in the firſt ſenſe, the thing conceived may be no propoſition, but a ſimple term only, as a pyramid, an obeliſk. Yet it may be obſerved, that even a propoſition may be ſimply apprehended without forming any judgment of its truth or falſehood: For it is one thing to conceive the meaning of a propoſition; it is another thing to judge it to be true or falſe.

Although the diſtinction between ſimple apprehenſion and every degree of aſſent or judgment, be perfectly evident to every man who reflects

CHAP. I. reflects attentively on what passes in his own mind; although it is very necessary, in treating of the powers of the mind, to attend carefully to this distinction; yet, in the affairs of common life, it is seldom necessary to observe it accurately. On this account we shall find, in all common languages, the words which express one of those operations frequently applied to the other. To think, to suppose, to imagine, to conceive, to apprehend, are the words we use to express simple apprehension; but they are all frequently used to express judgment. Their ambiguity seldom occasions any inconvenience in the common affairs of life, for which language is framed. But it has perplexed Philosophers, in treating of the operations of the mind, and will always perplex them, if they do not attend accurately to the different meanings which are put upon those words on different occasions.

9. Most of the operations of the mind, from their very nature, must have objects to which they are directed, and about which they are employed. He that perceives, must perceive something; and that which he perceives is called the object of his perception. To perceive, without having any object of perception, is impossible. The mind that perceives, the object perceived, and the *operation* of perceiving that object, are distinct things, and are distinguished in the structure of all languages. In this sentence, "I see, or perceive the moon;" *I* is the person or *mind*; the active verb *see* denotes the operation of that mind; and the *moon* denotes the object. What we have said of perceiving, is equally applicable to most operations of the mind. Such operations are, in all languages, expressed by active transitive verbs: And we know,

know, that, in all languages, ſuch verbs require a thing or perſon, which is the agent, and a noun following in an oblique caſe, which is the object. Whence it is evident, that all mankind, both thoſe who have contrived language, and thoſe who uſe it with underſtanding, have diſtinguiſhed theſe three things as different, to wit, the operations of the mind, which are expreſſed by active verbs, the mind itſelf, which is the nominative to thoſe verbs, and the object, which is, in the oblique caſe, governed by them. CHAP. I.

It would have been unneceſſary to explain ſo obvious a diſtinctoin, if ſome ſyſtems of philoſophy had not confounded it. Mr. HUME's ſyſtem, in particular, confounds all diſtinction between the operations of the mind and their objects. When he ſpeaks of the ideas of memory, the ideas of imagination, and the ideas of ſenſe, it is often impoſſible, from the tenor of his diſcourſe, to know whether, by thoſe ideas, he means the operations of the mind, or the objects about which they are employed. And indeed, according to his ſyſtem, there is no diſtinction between the one and the other.

A Philoſopher is, no doubt, entitled to examine even thoſe diſtinctions that are to be found in the ſtructure of all languages; and, if he is able to ſhew that there is no foundation for them in the nature of the things diſtinguiſhed; if he can point out ſome prejudice common to mankind which has led them to diſtinguiſh things that are not really different; in that caſe, ſuch a diſtinction may be imputed to a vulgar error, which ought to be corrected in philoſophy. But when, in his firſt ſetting out, he takes it for granted, without proof, that diſtinctions found in

CHAP. I. in the ſtructure of all languages, have no foundation in nature; this ſurely is too faſtidious a way of treating the common ſenſe of mankind. When we come to be inſtructed by Philoſophers, we muſt bring the old light of common ſenſe along with us, and by it judge of the new light which the Philoſopher communicates to us. But when we are required to put out the old light altogether, that we may follow the new, we have reaſon to be on our guard. There may be diſtinctions that have a real foundation, and which may be neceſſary in philoſophy, which are not made in common language, becauſe not neceſſary in the common buſineſs of life. But I believe no inſtance will be found of a diſtinction made in all languages, which has not a juſt foundation in nature.

10. The word *idea* occurs ſo frequently in modern philoſophical writings upon the mind, and is ſo ambiguous in its meaning, that it is neceſſary to make ſome obſervations upon it. There are chiefly two meanings of this word in modern authors, a popular and a philoſophical.

Firſt, In popular language, *idea* ſignifies the ſame thing as conception, apprehenſion, notion. To have an idea of any thing, is to conceive it. To have a diſtinct idea, is to conceive it diſtinctly. To have no idea of it, is not to conceive it at all. It was before obſerved, that conceiving or apprehending has always been conſidered by all men as an act or operation of the mind, and on that account has been expreſſed in all languages by an active verb. When, therefore, we uſe the phraſe of having ideas, in the popular ſenſe, we ought to attend to this, that it ſignifies preciſely the ſame thing which

which we commonly expreſs by the active verbs conceiving or apprehending.

When the word idea is taken in this popular ſenſe, no man can poſſibly doubt whether he has ideas. For he that doubts muſt think, and to think is to have ideas.

Sometimes, in popular language, a man's ideas ſignify his opinions. The ideas of ARISTOTLE, or of EPICURUS, ſignify the opinions of theſe Philoſophers. What was formerly ſaid of the words *imagine*, *conceive*, *apprehend*, that they are ſometimes uſed to expreſs judgment, is no leſs true of the word idea. This ſignification of the word ſeems indeed more common in the French language than in Engliſh. But it is found in this ſenſe in good Engliſh authors, and even in Mr. LOCKE. Thus we ſee, that having *ideas*, taken in the popular ſenſe, has preciſely the ſame meaning with conceiving, imagining, apprehending, and has likewiſe the ſame ambiguity. It may, therefore, be doubted, whether the introduction of this word into popular diſcourſe, to ſignify the operation of conceiving or apprehending, was at all neceſſary. For, *firſt*, We have, as has been ſhown, ſeveral words which are either originally Engliſh, or have been long naturalized, that expreſs the ſame thing; why therefore ſhould we adopt a Greek word in place of theſe, any more than a French or a German word? Beſides, the words of our own language are leſs ambiguous. For the word idea has, for many ages, been uſed by Philoſophers as a term of art; and in the different ſyſtems of Philoſophers means very different things.

Secondly, According to the philoſophical meaning of the word idea, it does not ſignify

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that act of the mind which we call thought or conception, but ſome object of thought. Ideas, according to Mr. LOCKE, (whoſe very frequent uſe of this word has probably been the occaſion of its being adopted into common language,) "are nothing but the immediate objects of the mind in thinking." But of thoſe objects of thought called Ideas, different ſects of Philoſophers have given a very different account. BRUCKERUS, a learned German, wrote a whole book giving the hiſtory of ideas.

The moſt ancient ſyſtem we have concerning ideas, is that which is explained in ſeveral dialogues of PLATO, and which many ancient, as well as modern writers, have aſcribed to PLATO as the inventor. But it is certain that PLATO had his doctrine upon this ſubject, as well as the name *idea*, from the ſchool of PYTHAGORAS. We have ſtill extant a tract of TIMÆUS the Locrian, a Pythagorean Philoſopher, concerning the ſoul of the world, in which we find the ſubſtance of PLATO's doctrine concerning ideas. They were held to be eternal, uncreated, and immutable forms or models, according to which the Deity made every ſpecies of things that exiſts, of an eternal matter. Thoſe Philoſophers held, that there are three firſt principles of all things. *Firſt*, An eternal matter, of which all things were made. *Secondly*, Eternal and immaterial forms or ideas, according to which they were made; and, *thirdly*, An efficient cauſe, the Deity, who made them. The mind of man, in order to its being fitted for the contemplation of theſe eternal ideas, muſt undergo a certain purification, and be weaned from ſenſible things. The eternal ideas are the only object of ſcience; becauſe, the objects of ſenſe being

being in a perpetual flux, there can be no real knowledge with regard to them.

The Philoſophers of the Alexandrian ſchool, commonly called *the latter Platoniſts*, made ſome change upon the ſyſtem of the ancient Platoniſts with reſpect to the eternal ideas. They held them not to be a principle diſtinct from the Deity, but to be the conceptions of things in the divine underſtanding, the natures and eſſences of all things being perfectly known to him from eternity.

It ought to be obſerved, that the Pythagoreans and the Platoniſts, whether elder or latter, made the eternal ideas to be objects of ſcience only, and of abſtract contemplation, not the the objects of ſenſe. And in this the ancient ſyſtem of eternal ideas differs from the modern one of Father MALEBRANCHE. He held in common with other modern Philoſophers, that no external thing is perceived by us immediately, but only by ideas: But he thought, that the ideas, by which we perceive an external world, are the ideas of the Deity himſelf, in whoſe mind the ideas of all things paſt, preſent, and future, muſt have been from eternity; for the Deity being intimately preſent to our minds at all times, may diſcover to us as much of his ideas as he ſees proper, according to certain eſtabliſhed laws of nature: And in his ideas, as in a mirror, we perceive whatever we do perceive of the external world.

Thus we have three ſyſtems, which maintain, that the ideas, which are the immediate objects of human knowledge, are eternal and immutable, and exiſted before the things which they repreſent. There are other ſyſtems, according to which, the ideas, which are the im-

CHAP. I. mediate objects of all our thoughts, are posterior to the things which they represent, and derived from them. We shall give some account of these; but as they have gradually sprung out of the ancient Peripatetic system, it is necessary to begin with some account of it.

ARISTOTLE taught, that all the objects of our thought enter at first by the senses; and, since the sense cannot receive external material objects themselves, it receives their species; that is, their images or forms, without the matter; as wax receives the form of the seal without any of the matter of it. These images or forms, impressed upon the senses, are called *sensible species*, and are the objects only of the sensitive part of the mind: But, by various internal powers, they are retained, refined, and spiritualized, so as to become objects of memory and imagination, and, at last, of pure intellection. When they are objects of memory and of imagination, they get the name of *phantasms*. When, by farther refinement, and being stripped of their particularities, they become objects of science; they are called *intelligible species*: So that every immediate object, whether of sense, of memory, of imagination, or of reasoning, must be some phantasm or species in the mind itself.

The followers of ARISTOTLE, especially the schoolmen, made great additions to this theory, which the Author himself mentions very briefly, and with an appearance of reserve. They entered into large disquisitions with regard to the sensible species, what kind of things they are; how they are sent forth by the object, and enter by the organs of the senses; how they are preserved and refined by various agents, called internal

internal ſenſes; concerning the number and offices of which they had many controverſies. But we ſhall not enter into a detail of theſe matters. CHAP. I.

The reaſon of giving this brief account of the theory of the Peripatetics, with regard to the immediate objects of our thoughts, is, becauſe the doctrine of modern Philoſophers concerning ideas is built upon it. Mr. LOCKE, who uſes this word ſo very frequently, tells us, that he means the ſame thing by it, as is commonly meant by *ſpecies* or *phantaſm*. GASSENDI, from whom LOCKE borrowed more than from any other author, ſays the ſame. The words *ſpecies* and *phantaſm*, are terms of art in the Peripatetic ſyſtem, and the meaning of them is to be learned from it.

The theory of DEMOCRITUS and EPICURUS, on this ſubject, was not very unlike to that of the Peripatetics. They held, that all bodies continually ſend forth ſlender films or ſpectres from their ſurface, of ſuch extreme ſubtilty, that they eaſily penetrate our groſs bodies, or enter by the organs of ſenſe, and ſtamp their image upon the mind. The ſenſible ſpecies of ARISTOTLE were mere forms without matter. The ſpectres of EPICURUS were compoſed of a very ſubtile matter.

Modern Philoſophers, as well as the Peripatetics and Epicureans of old, have conceived, that external objects cannot be the immediate objects of our thought; that there muſt be ſome image of them in the mind itſelf, in which, as in a mirror, they are ſeen. And the name *idea*, in the philoſophical ſenſe of it, is given to thoſe internal and immediate objects of our thoughts. The external thing is the remote or mediate object; but the idea, or image

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image of that object in the mind, is the immediate object, without which we could have no perception, no remembrance, no conception of the mediate object.

When, therefore, in common language, we speak of having an idea of any thing, we mean no more by that expreſſion, but thinking of it. The vulgar allow, that this expreſſion implies a mind that thinks; an act of that mind which we call thinking, and an object about which we think. But, beſides theſe three, the Philoſopher conceives that there is a fourth, to wit, the *idea*, which is the immediate object. The idea is in the mind itſelf, and can have no exiſtence but in a mind that thinks; but the remote or mediate object may be ſomething external, as the ſun or moon; it may be ſomething paſt or future; it may be ſomething which never exiſted. This is the philoſophical meaning of the word *idea*; and we may obſerve, that this meaning of that word is built upon a philoſophical opinion: For, if Philoſophers had not believed that there are ſuch immediate objects of all our thoughts in the mind, they would never have uſed the word idea to expreſs them.

I ſhall only add on this article, that, although I may have occaſion to uſe the word idea in this philoſophical ſenſe in explaining the opinions of others, I ſhall have no occaſion to uſe it in expreſſing my own, becauſe I believe *ideas*, taken in this ſenſe, to be a mere fiction of Philoſophers. And, in the popular meaning of the word, there is the leſs occaſion to uſe it, becauſe the Engliſh words *thought*, *notion*, *apprehenſion*, anſwer the purpoſe as well as the Greek word *idea*; with this advantage, that they are leſs ambiguous. There is, indeed,

deed, a meaning of the word idea, which I think moſt agreeable to its uſe in ancient philoſophy, and which I would willingly adopt, if uſe, the arbiter of language, did permit. But this will come to be explained afterwards. CHAP. I.

11. The word *impreſſion* is uſed by Mr. HUME, in ſpeaking of the operations of the mind, almoſt as often as the word *idea* is by Mr. LOCKE. What the latter calls ideas, the former divides into two claſſes; one of which he calls impreſſions, the other ideas. I ſhall make ſome obſervations upon Mr. HUME's explication of *that* word, and then conſider the proper meaning of it in the Engliſh language.

"We may divide, (ſays Mr. HUME, Eſſays, "vol. 2. page 18.) all the perceptions of the "human mind into two claſſes or ſpecies, "which are diſtinguiſhed by their different de- "grees of force and vivacity. The leſs lively "and forcible are commonly denominated "thoughts or ideas. The other ſpecies want "a name in our language, and in moſt others; "let us therefore uſe a little freedom, and call "them impreſſions. By the term *impreſſions*, "then, I mean all our more lively perceptions, "when we hear, or ſee, or feel, or love, or "hate, or deſire, or will. Ideas are the leſs "lively perceptions, of which we are conſci- "ous, when we reflect on any of thoſe ſenſati- "ons or movements above mentioned."

This is the explication Mr. HUME hath given in his Eſſays of the term *impreſſions*, when applied to the mind; and his explication of it, in his Treatiſe of human nature, is to the ſame purpoſe.

Diſputes about words belong rather to Grammarians than to Philoſophers; but Philoſophers ought not to eſcape cenſure when they corrupt a language

CHAP. I. a language by using words in a way which the purity of the language will not admit. I find fault with Mr. HUME's phraseology in the words I have quoted,

First, Because he gives the name of perceptions to every operation of the mind. Love is a perception, hatred a perception. Desire is a perception, will is a perception; and, by the same rule, a doubt, a question, a command, is a perception. This is an intolerable abuse of language, which no Philosopher has authority to introduce.

Secondly, When Mr. HUME says, *that we may divide all the perceptions of the human mind into two classes or species, which are distinguished by their degrees of force and vivacity*, the manner of expression is loose and unphilosophical. To differ in species is one thing; to differ in degree is another. Things which differ in degree only must be of the same species. It is a maxim of common sense, admitted by all men, that *greater* and *less* do not make a change of species. The same man may differ in the degree of his force and vivacity, in the morning and at night; in health and in sickness: But this is so far from making him a different species, that it does not so much as make him a different individual. To say, therefore, that two different classes, or species of perceptions, are distinguished by the degrees of their force and vivacity, is to confound a difference of *degree* with a difference of *species*, which every man of understanding knows how to distinguish.

Thirdly, We may observe, that this Author, having given the general name of perception to all the operations of the mind, and distinguished them into two classes or species, which differ

differ only in degree of force and vivacity, tells us, that he gives the name of impreſſions to all our more lively perceptions; to wit, when we hear, or ſee, or feel, or love, or hate, or deſire, or will. There is great confuſion in this account of the meaning of the word *impreſſion*. When I ſee, this is an *impreſſion*. But why has not the Author told us, whether he gives the name of *impreſſion* to the object ſeen, or to that act of my mind by which I ſee it? When I ſee the full moon, the full moon is one thing, my perceiving it is another thing. Which of theſe two things does he call an impreſſion? We are left to gueſs this; nor does all that this Author writes about impreſſions clear this point. Every thing he ſays tends to darken it, and to lead us to think, that the full moon which I ſee, and my ſeeing it, are not two things, but one and the ſame thing. CHAP. I.

The ſame obſervation may be applied to every other inſtance the Author gives to illuſtrate the meaning of the word *impreſſion*. "When we hear, when we feel, when we "love, when we hate, when we deſire, when "we will." In all theſe acts of the mind there muſt be an *object*, which is heard, or felt, or loved, or hated, or deſired, or willed. Thus, for inſtance, I love my country. This, ſays Mr. HUME, is an *impreſſion*. But what is the *impreſſion?* Is it my country, or is it the affection I bear to it? I aſk the Philoſopher this queſtion; but I find no anſwer to it. And when I read all that he has *written* on this ſubject, I find this word *impreſſion* ſometimes uſed to ſignify an operation of the mind, ſometimes the object of the operation; but, for the moſt part, it is a vague and indetermined word that ſignifies both.

I know

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I know not whether it may be conſidered as an apology for ſuch abuſe of words, in an Author who underſtood the language ſo well, and uſed it with ſo great propriety in writing on other ſubjects, that Mr. HUME's ſyſtem, with regard to the mind, required a language of a different ſtructure from the common; or, if expreſſed in plain Engliſh, would have been too ſhocking to the common ſenſe of mankind. To give an inſtance or two of this. If a man receives a preſent on which he puts a high value; if he ſee and handle it, and put it in his pocket, this, ſays Mr. HUME, is an *impreſſion*. If the man only dream that he received ſuch a preſent, this is an *idea*. Wherein lies the difference between this impreſſion and this idea; between the dream and the reality? They are different claſſes or ſpecies, ſays Mr. HUME: ſo far all men will agree with him. But he adds, that they are diſtinguiſhed only by different degrees of force and vivacity. Here he inſinuates a tenet of his own, in contradiction to the common ſenſe of mankind. Common ſenſe convinces every man, that a lively dream is no nearer to a reality than a faint one; and that if a man ſhould dream that he had all the wealth of Crœſus, it would not put one farthing in his pocket. It is impoſſible to fabricate arguments againſt ſuch undeniable principles, without confounding the meaning of words.

In like manner, if a man would perſuade me that the moon which I ſee, and my ſeeing it, are not two things, but one and the ſame thing, he will anſwer his purpoſe leſs by arguing this point in plain Engliſh, than by confounding the two under one name, ſuch as that of an *impreſſion*:

impreſſion: For ſuch is the power of words, that if we can be brought to the habit of calling two things that are connected, *by the ſame name*, we are the more eaſily led to believe them to be one and the ſame thing.

Let us next conſider the proper meaning of the word *impreſſion* in Engliſh, that we may ſee how far it is fit to expreſs either the operations of the mind, or their objects.

When a figure is ſtamped upon a body by preſſure, that figure is called an *impreſſion*, as the impreſſion of a ſeal on wax, of printing-types, or of a copperplate, on paper. This ſeems now to be the literal ſenſe of the word; the effect borrowing its name from the cauſe. But by metaphor or analogy, like moſt other words, its meaning is extended, ſo as to ſignify any change produced in a body by the operation of ſome external cauſe. A blow of the hand makes no impreſſion on a ſtone-wall; but a battery of canon may. The moon raiſes a tide in the ocean, but makes no impreſſion on rivers and lakes.

When we ſpeak of making an impreſſion on the mind, the word is carried ſtill farther from its literal meaning; uſe, however, which is the arbiter of language, authoriſes this application of it. As when we ſay that admonition and reproof make little impreſſion on thoſe who are confirmed in bad habits. The ſame diſcourſe delivered in one way, makes a ſtrong impreſſion on the hearers; delivered in another way, it makes no impreſſion at all.

It may be obſerved, that, in ſuch examples, an impreſſion made on the mind always implies ſome change of purpoſe or will; ſome new habit produced, or ſome former habit weakened; ſome

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some passion raised or allayed. When such changes are produced by persuasion, example, or any external cause, we say that such causes make an impression upon the mind. But when things are seen or heard, or apprehended, without producing any passion or emotion, we say that they make no impression.

In the most extensive sense, an impression is a change produced in some passive subject by the operation of an external cause. If we suppose an active being to produce any change in itielf by its own active power, this is never called an impression. It is the act or operation of the being itself, not an impression upon it. From this it appears, that to give the name of an impression to any effect produced in the mind, is to suppose that the mind does not act at all in the production of that effect. If seeing, hearing, desiring, willing, be operations of the mind, they cannot be impressions. If they be impressions, they cannot be operations of the mind. In the structure of all languages, they are considered as acts or operations of the mind itself, and the names given them imply this. To call them impressions, therefore, is to trespass against the structure, not of a particular language only, but of all languages.

If the word *impression* be an improper word to signify the operations of the mind, it is at least as improper to signify their objects; for would any man be thought to speak with propriety, who should say that the sun is an impression, that the earth and the sea are impressions?

It is commonly believed, and taken for granted, that every language, if it be sufficiently copious in words, is equally fit to express all

all opinions, whether they be true or falſe. I apprehend, however, that there is an exception to this general rule, which deſerves our notice. There are certain common opinions of mankind, upon which the ſtructure and grammar of all languages are founded. While theſe opinions are common to all men, there will be a great ſimilarity in all languages that are to be found on the face of the earth. Such a ſimilarity there really is; for we find in all languages the ſame parts of ſpeech, the diſtinction of nouns and verbs, the diſtinction of nouns into adjective and ſubſtantive, of verbs into active and paſſive. In verbs we find like tenſes, moods, perſons and numbers. There are general rules of grammar, the ſame in all languages. This ſimilarity of ſtructure in all languages ſhews an uniformity among men in thoſe opinions upon which the ſtructure of language is founded.

If, for inſtance, we ſhould ſuppoſe that there was a nation who believed that the things which we call attributes might exiſt without a ſubject, there would be in their language no diſtinction between adjectives and ſubſtantives, nor would it be a rule with them that an adjective has no meaning, unleſs when joined to a ſubſtantive. If there was any nation who did not diſtinguiſh between acting and being acted upon, there would in their language be no diſtinction between active and paſſive verbs, nor would it be a rule that the active verb muſt have an agent in the nominative caſe; but that, in the paſſive verb, the agent muſt be in an oblique caſe.

The ſtructure of all languages is grounded upon common notions, which Mr. HUME's philoſophy

CHAP. I. philoſophy oppoſes, and endeavours to overturn. This no doubt led him to warp the common language into a conformity with his principles; but we ought not to imitate him in this, until we are ſatisfied that his principles are built on a ſolid foundation.

12. Senſation is a name given by Philoſophers to an act of mind, which may be diſtinguiſhed from all others by this, that it hath no object diſtinct from the act itſelf. Pain of every kind is an uneaſy ſenſation. When I am pained, I cannot ſay that the pain I feel is one thing, and that my feeling it, is another thing. They are one and the ſame thing, and cannot be diſjoined, even in imagination. Pain, when it is not felt, has no exiſtence. It can be neither greater or leſs in degree or duration, nor any thing elſe in kind, than it is felt to be. It cannot exiſt by itſelf, nor in any ſubject, but in a ſentient being. No quality of an inanimate inſentient being can have the leaſt reſemblance to it.

What we have ſaid of pain may be applied to every other ſenſation. Some of them are agreeable, others uneaſy, in various degrees. Theſe being objects of deſire or averſion, have ſome attention given to them; but many are indifferent, and ſo little attended to, that they have no name in any language.

Moſt operations of the mind, that have names in common language, are complex in their nature, and made up of various ingredients, or more ſimple acts; which, though conjoined in our conſtitution, muſt be disjoined by abſtraction, in order to our having a diſtinct and ſcientific notion of the complex operation. In ſuch operations, ſenſation for the moſt part makes

makes an ingredient. Thoſe who do not attend to the complex nature of ſuch operations, are apt to reſolve them into ſome one of the ſimple acts of which they are compounded, overlooking the others: And from this cauſe many diſputes have been raiſed, and many errors have been occaſioned with regard to the nature of ſuch operations.

The perception of external objects is accompanied with ſome ſenſation correſponding to the object perceived, and ſuch ſenſations have, in many caſes, in all languages, the ſame name with the external object which they always accompany. The difficulty of disjoining by abſtraction, things thus conſtantly conjoined in the courſe of nature, and things, which have one and the ſame name in all languages, has likewiſe been frequently an occaſion of errors in the philoſophy of the mind. To avoid ſuch errors, nothing is of more importance than to have a diſtinct notion of that ſimple act of the mind which we call *ſenſation*, and which we have endeavoured to deſcribe. By this means we ſhall find it more eaſy to diſtinguiſh it from every external object that it accompanies, and from every other act of the mind that may be conjoined with it. For this purpoſe, it is likewiſe of importance, that the name of *ſenſation* ſhould, in philoſophical writings, be appropriated to ſignify this ſimple act of the mind, without including any thing more in its ſignification, or being applied to other purpoſes.

I ſhall add an obſervation concerning the word *feeling*. This word has two meanings. *Firſt*, It ſignifies the perceptions we have of external objects, by the ſenſe of touch. When we ſpeak of feeling a body to be hard or ſoft, rough

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rough or smooth, hot or cold; to feel these things, is to perceive them by touch. They are external things, and that act of the mind by which we feel them, is easily distinguished from the objects felt. *Secondly*, The word *feeling* is used to signify the same thing as *sensation*, which we have just now explained; and, in this sense, it has no object; the feeling and the thing felt are one and the same.

Perhaps betwixt feeling, taken in this last sense, and sensation, there may be this small difference, that sensation is most commonly used to signify those feelings which we have by our external senses and bodily appetites, and all our bodily pains and pleasures. But there are *feelings* of a nobler nature accompanying our affections, our moral judgments, and our determinations in matters of taste, to which the word *sensation* is less properly applied.

I have premised these observations on the meaning of certain words that frequently occur in treating of this subject, for two reasons, *first*, That I may be the better understood when I use them; and *secondly*, That those who would make any progress in this branch of science, may accustom themselves to attend very carefully to the meaning of words that are used in it. They may be assured of this, that the ambiguity of words, and the vague and improper application of them, have thrown more darkness upon this subject, than the subtilty and intricacy of things.

When we use common words, we ought to use them in the sense in which they are most commonly used by the best and purest writers in the language; and when we have occasion to enlarge or restrict the meaning of a common word,

word, or give it more precision than it has in common language, the reader ought to have warning of this, otherwise we shall impose upon ourselves and upon him. CHAP. I.

A very respectable writer has given a good example of this kind, by explaining in an Appendix to his *Elements of Criticism*, the terms he has occasion to use. In that Appendix, most of the words are explained on which I have been making observations. And the explication I have given, I think, agrees, for the most part, with his.

Other words that need explication shall be explained as they occur.

CHAP. II.

Principles taken for granted.

AS there are words common to Philosophers and to the vulgar, which need no explication; so there are principles common to both, which need no proof, and which do not admit of direct proof.

One who applies to any branch of science must be come to years of understanding, and consequently must have exercised his reason, and the other powers of his mind, in various ways. He must have formed various opinions and principles by which he conducts himself in the affairs of life. Of those principles, some are common to all men, being evident in themselves, and so necessary in the conduct of life, that a man cannot live and act according to the rules of common prudence without them.

All men that have common understanding agree in such principles, and consider a man

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as lunatic or deſtitute of common ſenſe, who denies, or calls them in queſtion. Thus, if any man were found of ſo ſtrange a turn as not to believe his own eyes; to put no truſt in his ſenſes, nor have the leaſt regard to their teſtimony; would any man think it worth while to reaſon gravely with ſuch a perſon, and, by argument, to convince him of his error! Surely no wiſe man would. For before men can reaſon together, they muſt agree in firſt principles; and it is impoſſible to reaſon with a man who has no principles in common with you.

There are, therefore, common principles, which are the foundation of all reaſoning, and of all ſcience. Such common principles ſeldom admit of direct proof, nor do they need it. Men need not to be taught them; for they are ſuch as all men of common underſtanding know; or ſuch, at leaſt, as they give a ready aſſent to, as ſoon as they are propoſed and underſtood.

Such principles, when we have occaſion to uſe them in ſcience, are called *axioms*. And, although it be not abſolutely neceſſary, yet it may be of great uſe, to point out the principles or axioms on which a ſcience is grounded.

Thus, mathematicians, before they prove any of the propoſitions of mathematics, lay down certain axioms, or common principles, upon which they build their reaſonings. And although thoſe axioms be truths which every man knew before; ſuch as, That the whole is greater than a part, That equal quantities added to equal quantities, make equal ſums; yet, when we ſee nothing aſſumed in the proof of mathematical propoſitions, but ſuch ſelf-evident axioms,

axioms, the propoſitions appear more certain, and leave no room for doubt to diſpute.

In all other ſciences, as well as in mathematics, it will be found, that there are a few common principles, upon which all the reaſonings in that ſcience are grounded, and into which they may be reſolved. If theſe were pointed out and conſidered, we ſhould be better able to judge what ſtreſs may be laid upon the concluſions in that ſcience. If the principles be certain, the concluſions juſtly drawn from them muſt be certain. If the principles be only probable, the concluſions can only be probable. If the principles be falſe, dubious, or obſcure, the ſuperſtructure that is built upon them muſt partake of the weakneſs of the foundation.

Sir Isaac Newton, the greateſt of Natural Philoſophers, has given an example well worthy of imitation, by laying down the common principles or axioms, on which the reaſonings in natural philoſophy are built. Before this was done, the reaſonings of Philoſophers, in that ſcience, were as vague and uncertain as they are in moſt others. Nothing was fixed; all was diſpute and controverſy: But, by this happy expedient, a ſolid foundation is laid in that ſcience, and a noble ſuperſtructure is raiſed upon it, about which there is now no more diſpute or controverſy among men of knowledge, than there is about the concluſions of mathematics.

It may, however, be obſerved, that the firſt principles of natural philoſophy are of a quite different nature from mathematical axioms: They have not the ſame kind of evidence, nor are they neceſſary truths, as mathematical axi-

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oms are: They are such as these: That similar effects proceed from the same or similar causes: That we ought to admit of no other causes of natural effects, but such as are true, and sufficient to account for the effects. These are principles, which, though they have not the same kind of evidence that mathematical axioms have; yet have such evidence, that every man of common understanding readily assents to them, and finds it absolutely necessary to conduct his actions and opinions by them, in the ordinary affairs of life.

Though it has not been usual, yet, I conceive it may be useful, to point out some of those things which I shall take for granted, as first principles in treating of the mind and its faculties. There is the more occasion for this; because very ingenious men, such as DES CARTES, MALEBRANCHE, ARNAULD, LOCKE, and many others, have lost much labour, by not distinguishing things which require proof, from things which, though they may admit of illustration, yet being self-evident, do not admit of proof. When men attempt to deduce such self-evident principles from others more evident, they always fall into inconclusive reasoning: And the consequence of this has been, that others, such as BERKELEY and HUME, finding the arguments brought to prove such first principles to be weak and inconclusive, have been tempted first to doubt of them, and afterwards to deny them.

It is so irksome to reason with those who deny first principles, that wise men commonly decline it. Yet it is not impossible, that what is only a vulgar prejudice may be mistaken for a first principle. Nor is it impossible, that what is

is really a firſt principle may, by the enchantment of words, have ſuch a miſt thrown about it, as to hide its evidence, and to make a man of candour doubt of it. Such caſes happen more frequently perhaps in this ſcience than in any other; but they are not altogether without remedy. There are ways by which the evidence of firſt principles may be made more apparent when they are brought into diſpute; but they require to be handled in a way peculiar to themſelves. Their evidence is not demonſtrative, but intuitive. They require not proof, but to be placed in a proper point of view. This will be ſhown more fully in its proper place, and applied to thoſe very principles which we now aſſume. In the mean time, when they are propoſed as firſt principles, the reader is put on his guard, and warned to conſider whether they have a juſt claim to that character.

1. *Firſt*, then, I ſhall take it for granted, that I *think*, that I *remember*, that I *reaſon*, and, in general, that I really perform all thoſe operations of mind of which I am conſcious.

The operations of our minds are attended with conſciouſneſs; and this conſciouſneſs is the evidence, the only evidence which we have or can have of their exiſtence. If a man ſhould take it into his head to think or to ſay that his conſciouſneſs may deceive him, and to require proof that it cannot, I know of no proof that can be given him; he muſt be left to himſelf as a man that denies firſt principles, without which there can be no reaſoning. Every man finds himſelf under a neceſſity of believing what conſciouſneſs teſtifies, and every thing that hath this teſtimony is to be taken as a firſt principle.

2. As

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2. As by conſciouſneſs we know certainly the exiſtence of our preſent thoughts and paſſions; ſo we know the paſt by remembrance. And when they are recent, and the remembrance of them freſh, the knowledge of them, from ſuch diſtinct remembrance, is, in its certainty and evidence, next to that of conſciouſneſs.

3. But it is to be obſerved, that we are conſcious of many things to which we give little or no attention. We can hardly attend to ſeveral things at the ſame time; and our attention is commonly employed about that which is the object of our thought, and rarely about the thought itſelf. Thus, when a man is angry, his attention is turned to the injury done him, or the injurious perſon; and he gives very little attention to the paſſion of anger, although he is conſcious of it. It is in our power, however, when we come to the years of underſtanding, to give attention to our own thoughts and paſſions, and the various operations of our minds. And when we make theſe the objects of our attention, either while they are preſent, or when they are recent and freſh in our memory, this act of the mind is called *reflection*.

We take it for granted, therefore, that, by attentive reflection, a man may have a clear and certain knowledge of the operations of his own mind; a knowledge no leſs clear and certain, than that which he has of an external object when it is ſet before his eyes.

This reflection is a kind of intuition, it gives a like conviction with regard to internal objects, or things in the mind, as the faculty of ſeeing gives with regard to objects of ſight. A man muſt, therefore, be convinced beyond poſſibility of doubt, of every thing with regard

gard to the operations of his own mind, which he clearly and distinctly discerns by attentive reflection. CHAP. II.

4. I take it for granted that all the thoughts I am conscious of, or remember, are the thoughts of one and the same thinking principle, which I call *myself*, or my *mind*. Every man has an immediate and irresistible conviction, not only of his present existence, but of his continued existence and identity, as far back as he can remember. If any man should think fit to demand a proof that the thoughts he is successively conscious of belong to one and the same thinking principle. If he should demand a proof that he is the same person to-day as he was yesterday, or a year ago, I know no proof that can be given him: He must be left to himself, either as a man that is lunatic, or as one who denies first principles, and is not to be reasoned with.

Every man of a sound mind finds himself under a necessity of believing his own identity, and continued existence. The conviction of this is immediate and irresistible; and if he should lose this conviction, it would be a certain proof of insanity, which is not to be remedied by reasoning.

5. I take it for granted that there are some things which cannot exist by themselves, but must be in something else to which they belong, as qualities or attributes.

Thus motion cannot exist but in something that is moved. And to suppose that there can be motion while every thing is at rest, is a gross and palpable absurdity. In like manner, hardness and softness, sweetness and bitterness, are things which cannot exist by themselves; they are qualities of something which is hard or soft,

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ſoft, ſweet or bitter: That thing, whatever it be, of which they are qualities, is called their ſubject, and ſuch qualities neceſſarily ſuppoſe a ſubject.

Things which may exiſt by themſelves, and do not neceſſarily ſuppoſe the exiſtence of any thing elſe, are called ſubſtances; and with relation to the qualities or attributes that belong to them, they are called the ſubjects of ſuch qualities or attributes.

All the things which we immediately perceive by our ſenſes, and all the things we are conſcious of, are things which muſt be in ſomething elſe as their ſubject. Thus by my ſenſes, I perceive figure, colour, hardneſs, ſoftneſs, motion, reſiſtance and ſuch like things. But theſe are qualities, and muſt neceſſarily be in ſomething that is figured, coloured, hard or ſoft, that moves, or reſiſts. It is not to theſe qualities, but to that which is the ſubject of them, that we give the name of body. If any man ſhould think fit to deny that theſe things are qualities, or that they require any ſubject, I leave him to enjoy his opinion as a man who denies firſt principles, and is not fit to be reaſoned with. If he has common underſtanding, he will find that he cannot converſe half an hour without ſaying things which imply the contrary of what he profeſſes to believe.

In like manner, the things I am conſcious of, ſuch as thought, reaſoning, deſire, neceſſarily ſuppoſe ſomething that thinks, that reaſons, that deſires. We do not give the name of mind to thought, reaſon, or deſire; but to that being which thinks, which reaſons, and which deſires.

That every act or operation, therefore, ſuppoſes an agent, that every quality ſuppoſes a ſubject,

ſubject, are things which I do not attempt to prove, but take for granted. Every man of common underſtanding diſcerns this immediately, and cannot entertain the leaſt doubt of it. In all languages we find certain words which, by Grammarians, are called adjectives. Such words denote attributes, and every adjective muſt have a ſubſtantive to which it belongs; that is, every attribute muſt have a ſubject. In all languages we find active verbs which denote ſome action or operation; and it is a fundamental rule in the grammar of all languages, that ſuch a verb ſuppoſes a perſon; that is, in other words, that every action muſt have an agent. We take it, therefore, as a firſt principle, that goodneſs, wiſdom, and virtue, can only be in ſome being that is good, wiſe, and virtuous; that thinking ſuppoſes a being that thinks; and that every operation we are conſcious of ſuppoſes an agent that operates, which we call mind.

6. I take it for granted that, in moſt operations of the mind, there muſt be an object diſtinct from the operation itſelf. I cannot ſee, without ſeeing ſomething. To ſee without having any object of ſight is abſurd. I cannot remember, without remembering ſomething. The thing remembered is paſt, while the remembrance of it is preſent; and therefore the operation and the object of it muſt be diſtinct things. The operations of our minds are denoted, in all languages, by active tranſitive verbs, which, from their conſtruction in grammar, require not only a perſon or agent, but likewiſe an object of the operation. Thus the verb know, denotes an operation of mind. From the general ſtructure of language, this verb

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verb requires a perſon; I know, you know, or he knows: But it requires no leſs a noun in the accuſative caſe, denoting the thing known; for he that knows, muſt know ſomething; and to know, without having any object of knowledge, is an abſurdity too groſs to admit of reaſoning.

7. We ought likewiſe to take for granted, as firſt principles, things wherein we find an univerſal agreement, among the learned and unlearned, in the different nations and ages of the world. A conſent of ages and nations, of the learned and vulgar, ought, at leaſt, to have great authority, unleſs we can ſhow ſome prejudice, as univerſal as that conſent is, which might be the cauſe of it. Truth is one, but error is infinite. There are many truths ſo obvious to the human faculties, that it may be expected that men ſhould univerſally agree in them. And this is actually found to be the caſe with regard to many truths, againſt which we find no diſſent, unleſs perhaps that of a few ſceptical Philoſophers, who may juſtly be ſuſpected, in ſuch caſes, to differ from the reſt of mankind, through pride, obſtinacy, or ſome favourite paſſion. Where there is ſuch univerſal conſent in things not deep nor intricate, but which lie, as it were, on the ſurface, there is the greateſt preſumption that can be, that it is the natural reſult of the human faculties; and it muſt have great authority with every ſober mind that loves truth. *Major enim pars eo fere deferri ſolet quo a natura deducitur.* Cic. de Off. 1. 41.

Perhaps it may be thought, that it is impoſſible to collect the opinions of all men upon any point whatſoever, and, therefore, that this maxim

maxim can be of no uſe. But there are many caſes wherein it is otherwiſe. Who can doubt, for inſtance, whether mankind have, in all ages, believed the exiſtence of a material world, and that thoſe things which they ſee and handle are real, and not mere illuſions and apparitions? Who can doubt, whether mankind have univerſally believed, that every thing that begins to exiſt, and every change that happens in nature, muſt have a cauſe? Who can doubt, whether mankind have been univerſally perſuaded that there is a right and a wrong in human conduct? Some things which, in certain circumſtances, they ought to do, and other things which they ought not to do? The univerſality of theſe opinions, and of many ſuch that might be named, is ſufficiently evident, from the whole tenor of mens conduct, as far as our acquaintance reaches, and from the records of hiſtory, in all ages and nations, that are tranſmitted to us. CHAP. II.

There are other opinions that appear to be univerſal, from what is common in the ſtructure of all languages, ancient and modern, poliſhed and barbarous. Language is the expreſs image and picture of human thoughts; and, from the picture, we may often draw very certain concluſions with regard to the original. We find in all languages the ſame parts of ſpeech, nouns ſubſtantive and adjective, verbs active and paſſive, varied according to the tenſes of paſt, preſent, and future; we find adverbs, prepoſitions, and conjunctions. There are general rules of ſyntax common to all languages. This uniformity in the ſtructure of language, ſhows a certain degree of uniformity in thoſe notions upon which the ſtructure of language is grounded.

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We find, in the ſtructure of all languages, the diſtinction of acting and being acted upon, the diſtinction of action and agent, of quality and ſubject, and many others of the like kind; which ſhows, that theſe diſtinctions are founded in the univerſal ſenſe of mankind. We ſhall have frequent occaſion to argue from the ſenſe of mankind expreſſed in the ſtructure of language; and therefore it was proper here to take notice of the force of arguments drawn from this topic.

8. I need hardly ſay, that I ſhall alſo take for granted ſuch facts as are atteſted to the conviction of all ſober and reaſonable men, either by our ſenſes, by memory, or by human teſtimony. Although ſome writers on this ſubject have diſputed the authority of the ſenſes, of memory, and of every human faculty; yet we find, that ſuch perſons, in the conduct of life, in purſuing their ends, or in avoiding dangers, pay the ſame regard to the authority of their ſenſes, and other faculties, as the reſt of mankind. By this they give us juſt ground to doubt of their candour in their profeſſions of ſceptiſciſm.

This, indeed, has always been the fate of the few that have profeſſed ſcepticiſm, that, when they have done what they can to diſcredit their ſenſes, they find themſelves, after all, under a neceſſity of truſting to them. Mr. HUME has been ſo candid as to acknowledge this; and it is no leſs true of thoſe who have not ſhown the ſame candour: For I never heard that any ſceptic run his head againſt a poſt, or ſtept into a kennel, becauſe he did not believe his eyes.

Upon the whole, I acknowledge that we ought to be cautious, that we do not adopt opinions as firſt principles, which are not entitled to that character. But there is ſurely the leaſt

leaſt danger of men being impoſed upon in this way, when ſuch principles openly lay claim to the character, and are thereby fairly expoſed to the examination of thoſe who may diſpute their authority. We do not pretend, that thoſe things that are laid down as firſt principles may not be examined, and that we ought not to have our ears open to what may be pleaded againſt their being admitted as ſuch. Let us deal with them, as an upright judge does with a witneſs who has a fair character. He pays a regard to the teſtimony of ſuch a witneſs, while his character is unimpeached. But if it can be ſhown that he is ſuborned, or that he is influenced by malice or partial favour, his teſtimony loſes all its credit, and is juſtly rejected.

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Of Hypotheſes.

EVERY branch of human knowledge hath its proper principles, its proper foundation and method of reaſoning; and, if we endeavour to build it upon any other foundation, it will never ſtand firm and ſtable. Thus the hiſtorian builds upon teſtimony, and rarely indulges conjecture. The antiquarian mixes conjecture with teſtimony; and the former often makes the larger ingredient. The mathematician pays not the leaſt regard either to teſtimony or conjecture, but deduces every thing, by demonſtrative reaſoning, from his definitions and axioms. Indeed, whatever is built upon conjecture, is improperly called ſcience; for conjecture may beget opinion, but cannot produce

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duce knowledge. Natural philoſophy muſt be built upon the phænomena of the material ſyſtem, diſcovered by obſervation and experiment.

When men firſt began to philoſophiſe, that is, to carry their thoughts beyond the objects of ſenſe, and to enquire into the cauſes of things, and the ſecret operations of nature, it was very natural for them to indulge conjecture; nor was it to be expected, that, in many ages, they ſhould diſcover the proper and ſcientific way of proceeding in philoſophical diſquiſitions. Accordingly we find, that the moſt ancient ſyſtems in every branch of philoſophy were nothing but the conjectures of men famous for their wiſdom, whoſe fame gave authority to their opinions. Thus, in early ages, wiſe men conjectured, that this earth is a vaſt plain, ſurrounded on all hands by a boundleſs ocean. That from this ocean, the ſun, moon, and ſtars, emerge at their riſing, and plunge into it again at their ſetting.

With regard to the mind, men in their rudeſt ſtate are apt to conjecture, that the principle of life in a man is his breath; becauſe the moſt obvious diſtinction between a living and a dead man is, that the one breathes, and the other does not. To this it is owing, that, in ancient languages, the word which denotes the ſoul, is that which properly ſignifies breath or air.

As men advance in knowledge, their firſt conjectures appear ſilly and childiſh, and give place to others, which tally better with later obſervations and diſcoveries. Thus one ſyſtem of philoſophy ſucceeds another, without any claim to ſuperior merit; but this, that it is a more ingenious ſyſtem of conjectures, and accounts better for common appearances.

To omit many ancient ſyſtems of this kind, DES CARTES, about the middle of the laſt century,

tury, diſſatisfied with the *materia prima*, the *ſubſtantial forms*, and the *occult qualities* of the Peripatetics, conjectured boldly, that the heavenly bodies of our ſyſtem are carried round by a vortex or whirlpool of ſubtile matter, juſt as ſtraws and chaff are carried round in a tub of water. He conjectured, that the ſoul is ſeated in a ſmall gland in the brain, called the pineal gland: That there, as in her chamber of preſence, ſhe receives intelligence of every thing that affects the ſenſes, by means of a ſubtile fluid contained in the nerves, called the animal ſpirits; and that ſhe diſpatches theſe animal ſpirits, as her meſſengers, to put in motion the ſeveral muſcles of the body, as there is occaſion. By ſuch conjectures as theſe, Des Cartes could account for every phænomenon in nature, in ſuch a plauſible manner, as gave ſatisfaction to a great part of the learned world for more than half a century.

Such conjectures in philoſophical matters have commonly got the name of *hypotheſes*, or *theories*. And the invention of a hypotheſis, founded on ſome ſlight probabilities, which accounts for many appearances of nature, has been conſidered as the higheſt attainment of a Philoſopher. If the hypotheſis hangs well together, is embelliſhed by a lively imagination, and ſerves to account for common appearances; it is conſidered by many as having all the qualities that ſhould recommend it to our belief; and all that ought to be required in a philoſophical ſyſtem.

There is ſuch proneneſs in men of genius to invent hypotheſes, and in others to acquieſce in them, as the utmoſt which the human faculties can attain in philoſophy, that it is of the laſt

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laſt conſequence to the progreſs of real knowledge, that men ſhould have a clear and diſtinct underſtanding of the nature of hypotheſes in philoſophy, and of the regard that is due to them.

Although ſome conjectures may have a conſiderable degree of probability, yet it is evidently in the nature of conjecture to be uncertain. In every caſe the aſſent ought to be proportioned to the evidence; for to believe firmly, what has but a ſmall degree of probability, is a manifeſt abuſe of our underſtanding. Now, though we may, in many caſes, form very probable conjectures concerning the works of men, every conjecture we can form with regard to the works of God, has as little probability as the conjectures of a child with regard to the works of a man.

The wiſdom of God exceeds that of the wiſeſt man, more than his wiſdom exceeds that of a child. If a child were to conjecture how an army is to be formed in the day of battle; how a city is to be fortified, or a ſtate governed; what chance has he to gueſs right? As little chance has the wiſeſt man when he pretends to conjecture how the planets move in their courſes, how the ſea ebbs and flows, and how our minds act upon our bodies.

If a thouſand of the greateſt wits that ever the world produced, were, without any previous knowledge in anatomy, to ſit down and contrive how, and by what internal organs, the various functions of the human body are carried on; how the blood is made to circulate, and the limbs to move, they would not in a thouſand years hit upon any thing like the truth.

Of

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Of all the discoveries that have been made concerning the inward structure of the human body, never one was made by conjecture. Accurate observations of Anatomists have brought to light innumerable artifices of nature in the contrivance of this machine of the human body, which we cannot but admire as excellently adapted to their several purposes. But the most sagacious physiologist never dreamed of them till they were discovered. On the other hand, innumerable conjectures, formed in different ages, with regard to the structure of the body, have been confuted by observation, and none ever confirmed.

What we have said of the internal structure of the human body, may be said, with justice, of every other part of the works of God, wherein any real discovery has been made. Such discoveries have always been made by patient observation, by accurate experiments, or by conclusions drawn by strict reasoning from observations and experiments; and such discoveries have always tended to refute, but not to confirm, the theories and hypotheses which ingenious men had invented.

As this is a fact confirmed by the history of philosophy in all past ages, it ought to have taught men, long ago, to treat with just contempt hypotheses in every branch of philosophy, and to despair of ever advancing real knowledge in that way. The Indian Philosopher, being at a loss to know how the earth was supported, invented the hypothesis of a huge elephant; and this elephant he supposed to stand upon the back of a huge tortoise. This hypothesis, however ridiculous it appears to us, might seem very reasonable to other Indians,

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who knew no more than the inventor of it; and the ſame will be the fate of all hypotheſes invented by men to account for the works of God: They may have a decent and plauſible appearance to thoſe who are not more knowing than the inventor; but, when men come to be more enlightened, they will always appear ridiculous and childiſh.

This has been the caſe with regard to hypotheſes that have been revered by the moſt enlightened part of mankind for hundreds of years; and it will always be the caſe to the end of the world. For, until the wiſdom of men bear ſome proportion to the wiſdom of God, their attempts to find out the ſtructure of his works, by the force of their wit and genius, will be vain.

The fineſt productions of human art are immenſely ſhort of the meaneſt works of nature. The niceſt artiſt cannot make a feather, or the leaf of a tree. Human workmanſhip will never bear a compariſon with divine. Conjectures and hypotheſes are the invention and the workmanſhip of men, and muſt bear proportion to the capacity and ſkill of the inventor; and therefore will always be very unlike to the works of God, which it is the buſineſs of philoſophy to diſcover.

The world has been ſo long befooled by hypotheſes in all parts of philoſophy, that it is of the utmoſt conſequence to every man, who would make any progreſs in real knowledge, to treat them with juſt contempt, as the reveries of vain and fanciful men, whoſe pride makes them conceive themſelves able to unfold the myſteries of nature by the force of their genius,

nius. A learned man in an epiſtle to DES CARTES has the following obſervation, which very much deſerved the attention of that Philoſopher, and of all that come after him. "When "men, ſitting in their cloſet, and conſulting "only their books, attempt diſquiſitions into "nature, they may indeed tell how they would "have made the world, if God had given them "that in commiſſion; that is, they may deſcribe "chimeras, which correſpond with the imbe- "cillity of their own minds, no leſs than the "admirable beauty of the Univerſe correſponds "with the infinite perfection of its Creator; "but without an underſtanding truly divine, "they can never form ſuch an idea to them- "ſelves as the Deity had in creating things." CHAP. III.

Let us, therefore, lay down this as a fundamental principle in our enquiries into the ſtructure of the mind, and its operations, that no regard is due to the conjectures or hypotheſes of Philoſophers, however ancient, however generally received. Let us accuſtom ourſelves to try every opinion by the touchſtone of fact and experience. What can fairly be deduced from facts duly obſerved, or ſufficiently atteſted, is genuine and pure; it is the voice of God, and no fiction of human imagination.

The firſt rule of philoſophiſing laid down by the great NEWTON, is this; *Cauſas rerum naturalium, non plures admitti debere, quam quæ et veræ ſint, et earum phænomenis explicandis ſufficiant.* "No more cauſes, nor any other "cauſes of natural effects ought to be admit- "ted, but ſuch as are both true, and are ſuffi- "cient for explaining their appearances." This is a golden rule; it is the true and proper teſt, by which what is ſound and ſolid in phi-

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losophy may be distinguished from what is hollow and vain.

If a Philosopher, therefore, pretends to shew us the cause of any natural effect, whether relating to matter or to mind; let us first consider whether there is sufficient evidence that the cause he assigns does really exist. If there is not, reject it with disdain as a fiction which ought to have no place in genuine philosophy. If the cause assigned really exists, consider, in the next place, whether the effect it is brought to explain necessarily follows from it. Unless it has these two conditions, it is good for nothing.

When NEWTON had shown the admirable effects of gravitation in our planetary system, he must have felt a strong desire to know its cause. He could have invented a hypothesis for this purpose, as many had done before him. But his philosophy was of another complexion. Let us hear what he says: *Rationem harum gravitatis proprietatum ex phænomenis non potui deducere, et hypotheses non fingo. Quicquid enim ex phænomenis non deducitur hypothesis vocanda est. Et hypotheses, seu metaphysicæ, seu physicæ, seu qualitatum occultarum, seu mechanicæ, in philosophia experimentali locum non habent.*

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Of Analogy.

IT is natural to men to judge of things leſs known, by ſome ſimilitude they obſerve, or think they obſerve, between them and things more familiar or better known. In many caſes, we have no better way of judging. And where the things compared have really a great ſimilitude in their nature, when there is reaſon to think that they are ſubject to the ſame laws, there may be a conſiderable degree of probability in concluſions drawn from analogy.

Thus, we may obſerve a very great ſimilitude between this earth which we inhabit, and the other planets, Saturn, Jupiter, Mars, Venus, and Mercury. They all revolve round the ſun, as the earth does, although at different diſtances, and in different periods. They borrow all their light from the ſun, as the earth does. Several of them are known to revolve round their axis like the earth, and, by that means, muſt have a like ſucceſſion of day and night. Some of them have moons, that ſerve to give them light in the abſence of the ſun, as our moon does to us. They are all, in their motions ſubject to the ſame law of gravitation, as the earth is. From all this ſimilitude, it is not unreaſonable to think, that thoſe planets may, like our earth, be the habitation of various orders of living creatures. There is ſome probability in this concluſion from analogy.

In medicine, Phyſicians muſt, for the moſt part, be directed in their preſcriptions by analogy.

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logy. The conſtitution of one human body is ſo like to that of another, that it is reaſonable to think, that what is the cauſe of health or ſickneſs to one, may have the ſame effect upon another. And this generally is found true, though not without ſome exceptions.

In politics, we reaſon, for the moſt part, from analogy. The conſtitution of human nature is ſo ſimilar in different ſocieties or common wealths, that the cauſes of peace and war, of tranquillity and ſedition, of riches and poverty, of improvement and degeneracy, are much the ſame in all.

Analogical reaſoning, therefore, is not, in all caſes, to be rejected. It may afford a greater or a leſs degree of probability, according as the things compared are more or leſs ſimilar in their nature. But it ought to be obſerved, that, as this kind of reaſoning can afford only probable evidence at beſt; ſo unleſs great caution be uſed, we are apt to be led into error by it. For men are naturally diſpoſed to conceive a greater ſimilitude in things than there really is.

To give an inſtance of this: Anatomiſts, in ancient ages, ſeldom diſſected human bodies; but very often the bodies of thoſe quadrupeds, whoſe internal ſtructure was thought to approach neareſt to that of the human body. Modern Anatomiſts have diſcovered many miſtakes the ancients were led into, by their conceiving a greater ſimilitude between the ſtructure of men and of ſome beaſts than there is in reality. By this, and many other inſtances that might be given, it appears, that concluſions built on analogy ſtand on a ſlippery foundation; and that we ought never to reſt upon evidence

evidence of this kind, when we can have more direct evidence. CHAP. IV.

I know no Author who has made a more juſt and a more happy uſe of this mode of reaſoning, than Biſhop BUTLER, in his Analogy of Religion, Natural and Revealed, to the Conſtitution and Courſe of Nature. In that excellent Work, the Author does not ground any of the truths of religion upon analogy, as their proper evidence. He only makes uſe of analogy to anſwer objections againſt them. When objections are made againſt the truths of religion, which may be made with equal ſtrength againſt what we know to be true in the courſe of nature, ſuch objections can have no weight.

Analogical reaſoning, therefore, may be of excellent uſe in anſwering objections againſt truths which have other evidence. It may likewiſe give a greater or a leſs degree of probability in caſes where we can find no other evidence. But all arguments, drawn from analogy, are ſtill the weaker, the greater diſparity there is between the things compared; and therefore muſt be weakeſt of all when we compare body with mind becauſe there are no two things in nature more unlike.

There is no ſubject in which men have always been ſo prone to form their notions by analogies of this kind, as in what relates to the mind. We form an early acquaintance with material things by means of our ſenſes, and are bred up in a conſtant familiarity with them. Hence we are apt to meaſure all things by them; and to aſcribe to things moſt remote from matter, the qualities that belong to material things. It is for this reaſon, that mankind have, in all ages,

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ages, been so prone to conceive the mind itself to be some subtile kind of matter: That they have been disposed to ascribe human figure, and human organs, not only to angels, but even to the Deity. Though we are conscious of the operations of our own minds when they are exerted, and are capable of attending to them, so as to form a distinct notion of them; this is so difficult a work to men, whose attention is constantly solicited by external objects, that we give them names from things that are familiar, and which are conceived to have some similitude to them; and the notions we form of them are no less analogical than the names we give them. Almost all the words, by which we express the operations of the mind, are borrowed from material objects. To understand, to conceive, to imagine, to comprehend, to deliberate, to infer, and many others, are words of this kind; so that the very language of mankind, with regard to the operations of our minds, is analogical. Because bodies are affected only by contact and pressure, we are apt to conceive, that what is an immediate object of thought, and affects the mind, must be in contact with it, and make some impression upon it. When we imagine any thing, the very word leads us to think that there must be some image in the mind of the thing conceived. It is evident, that these notions are drawn from some similitude conceived between body and mind, and between the properties of body and the operations of mind.

To illustrate more fully that analogical reasoning from a supposed similitude of mind to body, which I conceive to be the most fruitful source

ſource of error with regard to the operations of our minds, I ſhall give an inſtance of it.

When a man is urged by contrary motives, thoſe on one hand inciting him to do ſome action, thoſe on the other to forbear it; he deliberates about it, and at laſt reſolves to do it, or not to do it. The contrary motives are here compared to the weights in the oppoſite ſcales of a balance; and there is not perhaps any inſtance that can be named of a more ſtriking analogy between body and mind. Hence the phraſes of weighing motives, of deliberating upon actions, are common to all languages.

From this analogy, ſome Philoſophers draw very important concluſions. They ſay, that, as the balance cannot incline to one ſide more than the other, when the oppoſite weights are equal; ſo a man cannot poſſibly determine himſelf if the motives on both hands are equal; and as the balance muſt neceſſarily turn to that ſide which has moſt weight, ſo the man muſt neceſſarily be determined to that hand where the motive is ſtrongeſt. And on this foundation ſome of the ſchoolmen maintained, that, if a hungry aſs were placed between two bundles of hay equally inviting, the beaſt muſt ſtand ſtill and ſtarve to death, being unable to turn to either, becauſe there are equal motives to both. This is an inſtance of that analogical reaſoning, which I conceive ought never to be truſted: For the analogy between a balance and a man deliberating, though one of the ſtrongeſt that can be found between matter and mind, is too weak to ſupport any argument. A piece of dead inactive matter, and an active intelligent being, are things very unlike; and

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because the one would remain at rest in a certain case, it does not follow that the other would be inactive in a case somewhat similar. The argument is no better than this, that, because a dead animal moves only as it is pushed, and, if pushed with equal force in contrary directions, must remain at rest; therefore the same thing must happen to a living animal; for surely the similitude between a dead animal and a living, is as great as that between a balance and a man.

The conclusion I would draw from all that has been said on analogy, is, that, in our enquiries concerning the mind, and its operations, we ought never to trust to reasonings, drawn from some supposed similitude of body to mind; and that we ought to be very much upon our guard, that we be not imposed upon by those analogical terms and phrases, by which the operations of the mind are expressed in all languages.

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Of the proper Means of knowing the Operations of the Mind.

SINCE we ought to pay no regard to hypotheses, and to be very suspicious of analogical reasoning, it may be asked from what source must the knowledge of the mind, and its faculties, be drawn?

I answer, the chief and proper source of this branch of knowledge is accurate reflection upon the operations of our own minds. Of this source we shall speak more fully, after making

making ſome remarks upon two others that may be ſubſervient to it. The firſt of them is attention to the ſtructure of language.

The language of mankind is expreſſive of their thoughts, and of the various operations of their minds. The various operations of the underſtanding, will, and paſſions, which are common to mankind, have various forms of ſpeech correſponding to them in all languages, which are the ſigns of them, and by which they are expreſſed: And a due attention to the ſigns may, in many caſes, give conſiderable light to the things ſignified by them.

There are in all languages modes of ſpeech, by which men ſignify their judgment, or give their teſtimony; by which they accept or refuſe; by which they aſk information or advice; by which they command, or threaten, or ſupplicate; by which they plight their faith in promiſes or contracts. If ſuch operations were not common to mankind, we ſhould not find in all languages forms of ſpeech, by which they are expreſſed.

All languages, indeed, have their imperfections; they can never be adequate to all the varieties of human thought; and therefore things may be really diſtinct in their nature, and capable of being diſtinguiſhed by the human mind, which are not diſtinguiſhed in common language. We can only expect, in the ſtructure of languages, thoſe diſtinctions which all mankind in the common buſineſs of life have occaſion to make.

There may be peculiarities in a particular language, of the cauſes of which we are ignorant, and from which, therefore, we can draw no concluſion. But whatever we find common

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to all languages, muſt have a common cauſe; muſt be owing to ſome common notion or ſentiment of the human mind.

We gave ſome examples of this before, and ſhall here add another. All languages have a plural number in many of their nouns; from which we may infer, that all men have notions, not of individual things only, but of attributes, or things which are common to many individuals; for no individual can have a plural number.

Another ſource of information in this ſubject, is a due attention to the courſe of human actions and conduct. The actions of men are effects: Their ſentiments, their paſſions, and their affections, are the cauſes of thoſe effects; and we may, in many caſes form, a judgment of the cauſe from the effect.

The behaviour of parents towards their children gives ſufficient evidence, even to thoſe who never had children, that the parental affection is common to mankind. It is eaſy to ſee, from the general conduct of men, what are the natural objects of their eſteem, their admiration, their love, their approbation, their reſentment, and of all their other original diſpoſitions. It is obvious, from the conduct of men in all ages, that man is by his nature a ſocial animal; that he delights to aſſociate with his ſpecies; to converſe, and to exchange good offices with them.

Not only the actions, but even the opinions of men may ſometimes give light into the frame of the human mind. The opinions of men may be conſidered as the effects of their intellectual powers, as their actions are the effects of their active principles. Even the prejudices and

and errors of mankind, when they are general, must have some cause no less general; the discovery of which will throw some light upon the frame of the human understanding. CHAP. V.

I conceive this to be the principal use of the history of philosophy. When we trace the history of the various philosophical opinions that have sprung up among thinking men, we are led into a labyrinth of fanciful opinions, contradictions, and absurdities, intermixed with some truths; yet we may sometimes find a clue to lead us through the several windings of this labyrinth: We may find that point of view which presented things to the author of the system, in the light in which they appeared to him. This will often give a consistency to things seemingly contradictory, and some degree of probability to those that appeared most fanciful.

The history of philosophy, considered as a map of the intellectual operations of men of genius, must always be entertaining, and may sometimes give us views of the human understanding, which could not easily be had any other way.

I return to what I mentioned as the main source of information on this subject; attentive reflection upon the operations of our own minds.

All the notions we have of mind, and of its operations, are, by Mr. Locke, called *ideas of reflection*. A man may have as distinct notions of remembrance, of judgment, of will, of desire, as he has of any object whatever. Such notions, as Mr. Locke justly observes, are got by the power of reflection. But what

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is this power of reflection? It is, says the same author, "that power by which the mind turns "its views inward, and observes its own acti- "ons and operations." He observes elsewhere, "That the understanding, like the "eye, whilst it makes us see and perceive all "other things, takes no notice of itself; and "that it requires art and pains to set it at a "distance, and make it its own object." CICERO hath expressed this sentiment most beautifully. Tusc. I. 28.

This power of the understanding to make its own operations its object, to attend to them, and examine them on all sides, is the power of reflection, by which alone we can have any distinct notion of the powers of our own, or of other minds.

This reflection ought to be distinguished from consciousness, with which it is too often confounded, even by Mr. LOCKE. All men are conscious of the operations of their own minds, at all times, while they are awake; but there are few who reflect upon them, or make them objects of thought.

From infancy, till we come to the years of understanding, we are employed solely about external objects. And, although the mind is conscious of its operations, it does not attend to them; its attention is turned solely to the external objects, about which those operations are employed. Thus, when a man is angry, he is conscious of his passion; but his attention is turned to the person who offended him, and the circumstances of the offence, while the passion of anger is not in the least the object of his attention.

I conceive,

I conceive, this is ſufficient to ſhew the difference between conſciouſneſs of the operations of our minds, and reflection upon them; and to ſhew that we may have the former without any degree of the latter. The difference between conſciouſneſs and reflection, is like to the difference between a ſuperficial view of an object which preſents itſelf to the eye, while we are engaged about ſomething elſe, and that attentive examination which we give to an object when we are wholly employed in ſurveying it. Attention is a voluntary act; it requires an active exertion to begin and to continue it; and it may be continued as long as we will; but conſciouſneſs is involuntary and of no continuance, changing with every thought.

The power of reflection upon the operations of their own minds does not appear at all in children. Men muſt be come to ſome ripeneſs of underſtanding before they are capable of it. Of all the powers of the human mind, it ſeems to be the laſt that unfolds itſelf. Moſt men ſeem incapable of acquiring it in any conſiderable degree. Like all our other powers, it is greatly improved by exerciſe; and until a man has got the habit of attending to the operations of his own mind, he can never have clear and diſtinct notions of them, nor form any ſteady judgment concerning them. His opinions muſt be borrowed from others, his notions confuſed and indiſtinct, and he may eaſily be led to ſwallow very groſs abſurdities. To acquire this habit, is a work of time and labour, even in thoſe who begin it early, and whoſe natural talents are tolerably fitted for it; but the difficulty will be daily diminiſhing, and the advantage of it is great. They will thereby be enabled

CHAP. V. enabled to think with precision and accuracy on every subject, especially on those subjects that are more abstract. They will be able to judge for themselves in many important points, wherein others must blindly follow a leader.

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Of the Difficulty of attending to the Operations of our own Minds.

THE difficulty of attending to our mental operations ought to be well understood, and justly estimated, by those who would make any progress in this science; that they may neither, on the one hand, expect success without pains and application of thought; nor, on the other, be discouraged, by conceiving that the obstacles that lie in the way are insuperable, and that there is no certainty to be attained in it. I shall, therefore, endeavour to point out the causes of this difficulty, and the effects that have arisen from it, that we may be able to form a true judgment of both.

1. The number and quick succession of the operations of the mind make it difficult to give due attention to them. It is well known, that if a great number of objects be presented in quick succession, even to the eye, they are confounded in the memory and imagination. We retain a confused notion of the whole, and a more confused one of the several parts, especially if they are objects to which we have never before given particular attention. No succession can be more quick than that of thought. The mind is busy while we are awake, continually

nually passing from one thought, and one ope- CHAP. VI.
ration, to another. The scene is constantly shifting. Every man will be sensible of this, who tries but for one minute to keep the same thought in his imagination, without addition or variation. He will find it impossible to keep the scene of his imagination fixed. Other objects will intrude without being called, and all he can do is to reject these intruders as quickly as possible, and return to his principal object.

2. In this exercise, we go contrary to habits which have been early acquired, and confirmed by long unvaried practice. From infancy, we are accustomed to attend to objects of sense, and to them only; and, when sensible objects have got such strong hold of the attention by confirmed habit, it is not easy to dispossess them. When we grow up, a variety of external objects solicits our attention, excites our curiosity, engages our affections, or touches our passions; and the constant round of employment, about external objects, draws off the mind from attending to itself; so that nothing is more just than the observation of Mr. LOCKE before mentioned, "That the understanding, like "the eye, while it surveys all the objects a- "round it, commonly takes no notice of it- "self."

3. The operations of the mind, from their very nature, lead the mind to give its attention to some other object. Our sensations, as will be shown afterwards, are natural signs, and turn our attention to the things signified by them; so much, that most of them, and those the most frequent and familiar, have no name in any language. In perception, memory, judgment, imagination, and reasoning, there

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is an object distinct from the operation itself; and, while we are led by a strong impulse to attend to the object, the operation escapes our notice. Our passions, affections, and all our active powers, have, in like manner, their objects which engross our attention, and divert it from the passion itself.

4. To this we may add a just observation made by Mr. HUME, That, when the mind is agitated by any passion, as soon as we turn our attention from the object to the passion itself, the passion subsides or vanishes, and by that means escapes our enquiry. This, indeed, is common to almost every operation of the mind: When it is exerted, we are conscious of it; but then we do not attend to the operation, but to its object. When the mind is drawn off from the object to attend to its own operation, that operation ceases, and escapes our notice.

5. As it is not sufficient to the discovery of mathematical truths, that a man be able to attend to mathematical figures; as it is necessary that he should have the ability to distinguish accurately things that differ, and to discern clearly the various relations of the quantities he compares; an ability which, though much greater in those who have the force of genius than in others, yet even in them requires exercise and habit to bring it to maturity: So, in order to discover the truth in what relates to the operations of the mind, it is not enough that a man be able to give attention to them; he must have the ability to distinguish accurately their minute differences; to resolve and analyse complex operations into their simple ingredients; to unfold the ambiguity of words,

words, which in this ſcience is greater than in any other, and to give them the ſame accuracy and preciſion that mathematical terms have. For, indeed, the ſame preciſion in the uſe of words; the ſame cool attention to the minute differences of things; the ſame talent for abſtraction and analyſing, which fits a man for the ſtudy of mathematics, is no leſs neceſſary in this. But there is this great difference between the two ſciences, that the objects of mathematics being things external to the mind, it is much more eaſy to attend to them, and fix them ſteadily in the imagination.

The difficulty attending our enquiries into the powers of the mind, ſerves to account for ſome events reſpecting this branch of philoſophy, which deſerve to be mentioned.

While moſt branches of ſcience have, either in ancient or in modern times, been highly cultivated, and brought to a conſiderable degree of perfection, this remains, to this day, in a very low ſtate, and as it were in its infancy.

Every ſcience invented by men muſt have its beginning and its progreſs; and, from various cauſes, it may happen that one ſcience ſhall be brought to a great degree of maturity, while another is yet in its infancy. The maturity of a ſcience may be judged of by this: When it contains a ſyſtem of principles, and concluſions drawn from them, which are ſo firmly eſtabliſhed, that, among thinking and intelligent men, there remains no doubt or diſpute about them; ſo that thoſe who come after may raiſe the ſuperſtructure higher, but ſhall never be able to overturn what is already built, in order to begin on a new foundation.

Geometry ſeems to have been in its infancy about the time of THALES and PYTHAGORAS;

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because many of the elementary propositions, on which the whole science is built, are ascribed to them as the inventors. EUCLID's Elements, which were written some ages after PYTHAGORAS, exhibit a system of geometry which deserves the name of a science; and though great additions have been made by APPOLLONIUS, ARCHIMEDES, PAPPUS, and others among the ancients, and still greater by the moderns; yet what was laid down in EUCLID's Elements was never set aside. It remains as the firm foundation of all future superstructures in that science.

Natural philosophy remained in its infant state near two thousand years after geometry had attained to its manly form: For natural philosophy seems not to have been built on a stable foundation, nor carried to any degree of maturity, till the last century. The system of DES CARTES, which was all hypothesis, prevailed in the most enlightened part of Europe till towards the end of last century. Sir ISAAC NEWTON has the merit of giving the form of a science to this branch of philosophy; and it need not appear surprising, if the philosophy of the human mind should be a century or two later in being brought to maturity.

It has received great accessions from the labours of several modern authors; and perhaps wants little more to entitle it to the name of a science, but to be purged of certain hypotheses, which have imposed on some of the most acute writers on this subject, and led them into downright scepticism.

What the ancients have delivered to us concerning the mind, and its operations, is almost entirely drawn, not from accurate reflection, but

but from ſome conceived analogy between body and mind. And although the modern authors I formerly named have given more attention to the operations of their own minds, and by that means have made important diſcoveries; yet, by retaining ſome of the ancient analogical notions, their diſcoveries have been leſs uſeful than they might have been, and have led to ſcepticiſm.

It may happen in ſcience, as in building, that an error in the foundation ſhall weaken the whole; and the farther the building is carried on, this weakneſs ſhall become the more apparent and the more threatening. Something of this kind ſeems to have happened in our ſyſtems concerning the mind. The acceſſion they have received by modern diſcoveries, though very important in itſelf, has thrown darkneſs and obſcurity upon the whole, and has led men rather to ſcepticiſm than to knowledge. This muſt be owing to ſome fundamental errors that have not been obſerved; and when theſe are corrected, it is to be hoped, that the improvements that have been made will have their due effect.

The laſt effect I obſerve of the difficulty of enquiries into the powers of the mind, is, that there is no other part of human knowledge, in which ingenious authors have been ſo apt to run into ſtrange paradoxes, and even into groſs abſurdities.

When we find Philoſophers maintaining that there is no heat in the fire, nor colour in the rainbow: When we find the graveſt Philoſophers, from Des Cartes down to Biſhop Berkeley, muſtering up arguments to prove the exiſtence of a material world, and unable

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to find any that will bear examination: When we find Biſhop BERKELEY and Mr. HUME, the acuteſt Metaphyſicians of the age, maintaining that there is no ſuch thing as matter in the univerſe: That ſun, moon, and ſtars, the earth which we inhabit, our own bodies, and thoſe of our friends, are only ideas in our minds, and have no exiſtence but in thought: When we find the laſt maintaining that there is neither body nor mind; nothing in nature but ideas and impreſſions, without any ſubſtance on which they are impreſſed: That there is no certainty, nor indeed probability, even in mathematical axioms: I ſay, when we conſider ſuch extravagancies of many of the moſt acute writers on this ſubject, we may be apt to think the whole to be only a dream of fanciful men, who have entangled themſelves in cobwebs ſpun out of their own brain. But we ought to conſider, that the more cloſely and ingeniouſly men reaſon from falſe principles, the more abſurdities they will be led into; and when ſuch abſurdities help to bring to light the falſe principles from which they are drawn, they may be the more eaſily forgiven.

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Diviſion of the Powers of the Mind.

THE powers of the mind are ſo many, ſo various, and ſo connected and complicated in moſt of its operations, that there never has been any diviſion of them propoſed which is not liable to conſiderable objections. We ſhall therefore take that general diviſion which is the moſt common, into the powers of *underſtanding* and thoſe of *will*. Under the will we comprehend our active powers, and all that lead to action, or influence the mind to act; ſuch as, appetites, paſſions, affections. The underſtanding comprehends our contemplative powers; by which we perceive objects; by which we conceive or remember them; by which we analyſe or compound them; and by which we judge and reaſon concerning them.

Although this general diviſion may be of uſe in order to our proceeding more methodically in our ſubject, we are not to underſtand it as if, in thoſe operations which are aſcribed to the underſtanding, there were no exertion of will or activity, or as if the underſtanding were not employed in the operations aſcribed to the will; for I conceive there is no operation of the underſtanding wherein the mind is not active in ſome degree. We have ſome command over our thoughts, and can attend to this or to that, of many objects which preſent themſelves to our ſenſes, to our memory, or to our imagination. We can ſurvey an object on this ſide or that, ſuperficially or accurately,

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rately, for a longer or a ſhorter time; ſo that our contemplative powers are under the guidance and direction of the active; and the former never purſue their object without being led and directed, urged or reſtrained by the latter; And becauſe the underſtanding is always more or leſs directed by the will, mankind have aſcribed ſome degree of activity to the mind in its intellectual operations, as well as in thoſe which belong to the will, and have expreſſed them by active verbs, ſuch as ſeeing, hearing, judging, reaſoning, and the like.

And as the mind exerts ſome degree of activity even in the operations of underſtanding, ſo it is certain that there can be no act of will which is not accompanied with ſome act of underſtanding. The will muſt have an object, and that object muſt be apprehended or conceived in the underſtanding. It is therefore to be remembered, that in moſt, if not all operations of the mind, both faculties concur; and we range the operation under that faculty which hath the largeſt ſhare in it.

The intellectual powers are commonly divided into ſimple apprehenſion, judgment, and reaſoning. As this diviſion has in its favour the authority of antiquity, and of a very general reception, it would be improper to ſet it aſide without giving any reaſon; I ſhall therefore explain it briefly, and give the reaſons why I chuſe to follow another.

It may be obſerved, that, without apprehenſion of the objects, concerning which we judge, there can be no judgment; as little can there be reaſoning without both apprehenſion and judgment: Theſe three operations, therefore, are not independent of each other. The ſecond

cond includes the firſt, and the third includes both the firſt and ſecond: But the firſt may be exerciſed without either of the other two. It is on that account called *ſimple apprehenſion;* that is, apprehenſion unaccompanied with any judgment about the object apprehended. This ſimple apprehenſion of an object is, in common language, called *having a notion, or having a conception* of the object, and by late authors is called *having an idea of it.* In ſpeaking, it is expreſſed by a word, or by a part of a propoſition, without that compoſition and ſtructure which makes a complete ſentence; as *a man, a man of fortune.* Such words, taken by themſelves, ſignify ſimple apprehenſions. They neither affirm nor deny; they imply no judgment or opinion of the thing ſignified by them, and therefore cannot be ſaid to be either true or falſe.

The ſecond operation in this diviſion is *judgment;* in which, ſay the Philoſophers, there muſt be two objects of thought compared, and ſome agreement or diſagreement, or, in general, ſome relation diſcerned between them; in conſequence of which, there is an opinion or belief of that relation which we diſcern. This operation is expreſſed in ſpeech by a propoſition, in which ſome relation between the things compared is affirmed or denied: As when we ſay, *All men are fallible.*

Truth and falſehood are qualities which belong to judgment only: or to propoſitions by which judgment is expreſſed. Every judgment, every opinion, and every propoſition, is either true or falſe. But words which neither affirm nor deny any thing, can have neither of thoſe qualities; and the ſame may be ſaid of ſimple apprehenſions,

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apprehenſions, which are ſignified by ſuch words.

The third operation is *reaſoning;* in which, from two or more judgments, we draw a concluſion.

This diviſion of our intellectual powers correſponds perfectly with the account commonly given by Philoſophers, of the ſucceſſive ſteps by which the mind proceeds in the acquiſition of its knowledge; which are theſe three: *Firſt*, by the ſenſes, or by other means, it is furniſhed with various ſimple apprehenſions, notions or ideas. Theſe are the materials which nature gives it to work upon; and from the ſimple ideas it is furniſhed with by nature, it forms various others more complex. *Secondly*, by comparing its ideas, and by perceiving their agreements and diſagreements, it forms its judgments. And, *laſtly*, from two or more judgments, it deduces concluſions of reaſoning.

Now, if all our knowledge is got by a procedure of this kind, certainly the threefold diviſion of the powers of underſtanding, into ſimple apprehenſion, judgment and reaſoning, is the moſt natural, and the moſt proper, that can be deviſed. This theory and that diviſion are ſo cloſely connected, that it is difficult to judge which of them has given riſe to the other; and they muſt ſtand or fall together. But if all our knowledge is not got by a proceſs of this kind; if there are other avenues of knowledge beſides the comparing our ideas, and perceiving their agreements and diſagreements, it is probable that there may be operations of the underſtanding which cannot be properly reduced under any of the three that have been explained.

Let

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Let us conſider ſome of the moſt familiar operations of our minds, and ſee to which of the three they belong. I begin with conſciouſneſs. I know that I think, and this of all knowledge is the moſt certain. Is that operation of my mind, which gives me this certain knowledge, to be called ſimple apprehenſion? No, ſurely. Simple apprehenſion neither affirms nor denies. It will not be ſaid that it is by reaſoning that I know that I think. It remains, therefore, that it muſt be by judgment, that is, according to the account given of judgment, by comparing two ideas, and perceiving the agreement between them. But what are the ideas compared? They muſt be the idea of myſelf, and the idea of thought, for they are the terms of the propoſition *I think*. According to this account then, firſt, I have the idea of myſelf, and the idea of thought; then, by comparing theſe two ideas, I perceive that I think.

Let any man who is capable of reflection judge for himſelf, whether it is by an operation of this kind that he comes to be convinced that he thinks? To me it appears evident, that the conviction I have that I think, is not got in this way; and therefore I conclude, either that conſciouſneſs is not judgment, or that judgment is not rightly defined to be the perception of ſome agreement or diſagreement between two ideas.

The perception of an object by my ſenſes, is another operation of the underſtanding. I would know whether it be ſimple apprehenſion, or judgment, or reaſoning. It is not ſimple apprehenſion, becauſe I am perſuaded of the exiſtence of the object as much as I could be by

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by demonſtration. It is not judgment, if by judgment be meant the comparing ideas, and perceiving their agreements or diſagreements. It is not reaſoning, becauſe thoſe who cannot reaſon can perceive.

I find the ſame difficulty in claſſing memory under any of the operations mentioned.

There is not a more fruitful ſource of error in this branch of philoſophy, than diviſions of things which are taken to be complete when they are not really ſo. To make a perfect diviſion of any claſs of things, a man ought to have the whole under his view at once. But the greateſt capacity very often is not ſufficient for this. Some thing is left out which did not come under the Philoſopher's view when he made his diviſion: And to ſuit this to the diviſion, it muſt be made what nature never made it. This has been ſo common a fault of Philoſophers, that one who would avoid error ought to be ſuſpicious of diviſions, though long received, and of great authority, eſpecially when they are grounded on a theory that may be called in queſtion. In a ſubject imperfectly known, we ought not to pretend to perfect diviſions, but to leave room for ſuch additions or alterations as a more perfect view of the ſubject may afterwards ſuggeſt.

I ſhall not, therefore, attempt a complete enumeration of the powers of the human underſtanding. I ſhall only mention thoſe which I propoſe to explain, and they are the following;

1ſt, The powers we have by means of our external ſenſes. *2dly*, Memory. *3dly*, Conception. *4thly*, The powers of reſolving and analyſing complex objects, and compounding thoſe that are more ſimple. *5thly*, Judging. *6thly*,

6*thly*, Reaſoning. 7*thly*, Taſte. 8*thly*, Moral Perception; and, *laſt* of all, Conſciouſneſs.

CHAP. VIII.

Of ſocial Operations of Mind.

THERE is another diviſion of the powers of the mind, which, though it has been, ought not to be overlooked by writers on this ſubject, becauſe it has a real foundation in nature. Some operations of our minds, from their very nature, are *ſocial*, others are *ſolitary*.

By the firſt, I underſtand ſuch operations as neceſſarily ſuppoſe an intercourſe with ſome other intelligent being. A man may underſtand and will; he may apprehend, and judge, and reaſon, though he ſhould know of no intelligent being in the univerſe beſides himſelf. But, when he aſks information, or receives it; when he bears teſtimony, or receives the teſtimony of another; when he aſks a favour, or accepts one; when he gives a command to his ſervant, or receives one from a ſuperior: when he plights his faith in a promiſe or contract: theſe are acts of ſocial intercourſe between intelligent beings, and can have no place in ſolitude. They ſuppoſe underſtanding and will; but they ſuppoſe ſomething more, which is neither underſtanding nor will; that is, ſociety with other intelligent beings. They may be called intellectual, becauſe they can only be in intellectual beings: But they are neither ſimple apprehenſion, nor judgment, nor reaſoning, nor are they any combination of theſe operations.

To aſk a queſtion, is as ſimple an operation as to judge or to reaſon; yet it is neither judgment,

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ment, nor reaſoning, nor ſimple apprehenſion, nor is it any compoſition of theſe. Teſtimony is neither ſimple apprehenſion, nor judgment, nor reaſoning. The ſame may be ſaid of a promiſe, or of a contract. Theſe acts of mind are perfectly underſtood by every man of common underſtanding; but, when Philoſophers attempt to bring them within the pale of their diviſions, by analyſing them, they find inexplicable myſteries, and even contradictions, in them. One may ſee an inſtance of this, of many that might be mentioned, in Mr. HUME's Enquiry concerning the principles of morals, ſect. 3. part 2. note, near the end.

The attempts of Philoſophers to reduce the ſocial operations under the common philoſophical diviſions, reſemble very much the attempts of ſome Philoſophers to reduce all our ſocial affections to certain modifications of ſelf-love. The Author of our being intended us to be ſocial beings, and has, for that end, given us ſocial intellectual powers, as well as ſocial affections. Both are original parts of our conſtitution, and the exertions of both no leſs natural than the exertions of thoſe powers that are ſolitary and ſelfiſh.

Our ſocial intellectual operations, as well as our ſocial affections, appear very early in life, before we are capable of reaſoning; yet both ſuppoſe a conviction of the exiſtence of other intelligent beings. When a child aſks a queſtion of his nurſe, this act of his mind ſuppoſes not only a deſire to know what he aſks; it ſuppoſes likewiſe a conviction that the nurſe is an intelligent being, to whom he can communicate his thoughts, and who can communicate her thoughts to him. How he came by this

conviction

conviction so early, is a question of some importance in the knowledge of the human mind, and therefore worthy of the consideration of Philosophers. But they seem to have given no attention either to this early conviction, or to those operations of mind which suppose it. Of this we shall have occasion to treat afterwards.

All languages are fitted to express the social as well as the solitary operations of the mind. It may indeed be affirmed, that, to express the former, is the primary and direct intention of language. A man, who had no intercourse with any other intelligent being, would never think of language. He would be as mute as the beasts of the field; even more so, because they have some degree of social intercourse with one another, and some of them with man. When language is once learned, it may be useful even in our solitary meditations; and, by cloathing our thoughts with words, we may have a firmer hold of them. But this was not its first intention; and the structure of every language shews that it is not intended solely for this purpose.

In every language, a question, a command, a promise, which are social acts, can be expressed as easily and as properly as judgment, which is a solitary act. The expression of the last has been honoured with a particular name; it is called a proposition; it has been an object of great attention to Philosophers; it has been analysed into its very elements of subject, predicate, and copula. All the various modifications of these, and of propositions which are compounded of them, have been anxiously examined in many voluminous tracts. The expression of a question, of a command, or of a promise,

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promiſe, is as capable of being analyſed as a propoſition is; but we do not find that this has been attempted; we have not ſo much as given them a name different from the operations which they expreſs.

Why have ſpeculative men laboured ſo anxiouſly to analyſe our ſolitary operations, and given ſo little attention to the ſocial? I know no other reaſon but this, that, in the diviſions that have been made of the mind's operations, the ſocial have been omitted, and thereby thrown behind the curtain.

In all languages, the ſecond perſon of verbs, the pronoun of the ſecond perſon, and the vocative caſe in nouns, are appropriated to the expreſſion of ſocial operations of mind, and could never have had place in language but for this purpoſe: Nor is it a good argument againſt this obſervation, that, by a rhetorical figure, we ſometimes addreſs perſons that are abſent, or even inanimated beings, in the ſecond perſon. For it ought to be remembered, that all figurative ways of uſing words or phraſes ſuppoſe a natural and literal meaning of them.

ESSAY II.

OF THE POWERS WE HAVE BY MEANS OF OUR EXTERNAL SENSES.

CHAP. I.

Of the Organs of Senſe.

OF all the operations of our minds, the perception of external objects is the moſt familiar. The ſenſes come to maturity even in infancy, when other powers have not yet ſprung up. They are common to us with brute animals, and furniſh us with the objects about which our other powers are the moſt frequently employed. We find it eaſy to attend to their operations; and becauſe they are familiar, the names which properly belong to them are applied to other powers, which are thought to reſemble them; for theſe reaſons they claim to be firſt conſidered.

The perception of external objects is one main link of that myſterious chain which connects the material world with the intellectual. We ſhall find many things in this operation unaccountable; ſufficient to convince us, that we know but little of our own frame; and that a perfect comprehenſion of our mental powers, and of the manner of their operation, is beyond the reach of our underſtanding.

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In perception there are impreſſions upon the organs of ſenſe, the nerves, and brain, which, by the laws of our nature, are followed by certain operations of mind. Theſe two things are apt to be confounded; but ought moſt carefully to be diſtinguiſhed. Some Philoſophers, without good reaſon, have concluded, that the impreſſions made on the body are the proper efficient cauſe of perception. Others, with as little reaſon, have concluded, that impreſſions are made on the mind ſimilar to thoſe made on the body. From theſe miſtakes many others have ariſen. The wrong notions men have raſhly taken up with regard to the ſenſes, have led to wrong notions with regard to other powers which are conceived to reſemble them. Many important powers of mind have, eſpecially of late, been called internal ſenſes, from a ſuppoſed reſemblance to the external; ſuch as, the ſenſe of beauty, the ſenſe of harmony, the moral ſenſe. And it is to be apprehended, that errors, with regard to the external, have, from analogy, led to ſimilar errors with regard to the internal; it is therefore of ſome conſequence, even with regard to other branches of our ſubject, to have juſt notions concerning the external ſenſes.

In order to this, we ſhall begin with ſome obſervations on the organs of ſenſe, and on the impreſſions which in perception are made upon them, and upon the nerves and brain.

We perceive no external object, but by means of certain bodily organs which God has given us for that purpoſe. The Supreme Being who made us, and placed us in this world, hath given us ſuch powers of mind as he ſaw to be ſuited to our ſtate and rank in his creation.

tion. He has given us the power of perceiving many objects around us, the sun, moon, and stars, the earth and sea, and a variety of animals, vegetables, and inanimate bodies. But our power of perceiving these objects is limited in various ways, and particularly in this, that without the organs of the several senses, we perceive no external object. We cannot see without eyes, nor hear without ears: It is not only necessary that we should have these organs, but that they should be in a sound and natural state. There are many disorders of the eye that cause total blindness; others that impair the powers of vision, without destroying it altogether; and the same may be said of the organs of all the other senses.

All this is so well known from experience, that it needs no proof; but it ought to be observed, that we know it from experience only. We can give no reason for it, but that such is the will of our Maker. No man can shew it to be impossible to the Supreme Being to have given us the power of perceiving external objects without such organs. We have reason to believe, that when we put off these bodies, and all the organs belonging to them, our perceptive powers shall rather be improved than destroyed or impaired. We have reason to believe, that the Supreme Being perceives every thing in a much more perfect manner than we do, without bodily organs. We have reason to believe, that there are other created beings endowed with powers of perception more perfect and more extensive than ours, without any such organs as we find necessary.

We ought not, therefore, to conclude, that such bodily organs are, in their own nature, ne-

CHAP. I. ceſſary to perception; but rather, that, by the will of God, our power of perceiving external objects is limited and circumſcribed by our organs of ſenſe; ſo that we perceive objects in a certain manner, and in certain circumſtances, and in no other.

If a man was ſhut up in a dark room, ſo that he could ſee nothing but through one ſmall hole in the ſhutter of a window, Would he conclude, that the hole was the cauſe of his ſeeing, and that it is impoſſible to ſee any other way? Perhaps, if he had never in his life ſeen but in this way, he might be apt to think ſo; but the concluſion is raſh and groundleſs. He ſees, becauſe God has given him the power of ſeeing; and he ſees only through this ſmall hole, becauſe his power of ſeeing is circumſcribed by impediments on all other hands.

Another neceſſary caution in this matter is, that we ought not to confound the organs of perception with the being that perceives. Perception muſt be the act of ſome being that perceives. The eye is not that which ſees; it is only the organ by which we ſee. The ear is not that which hears; but the organ by which we hear; and ſo of the reſt.

A man cannot ſee the Satellites of Jupiter but by a teleſcope. Does he conclude from this, that it is the teleſcope that ſees thoſe ſtars? By no means; ſuch a concluſion would be abſurd. It is no leſs abſurd to conclude, that it is the eye that ſees, or the ear that hears. The teleſcope is an artificial organ of ſight, but it ſees not. The eye is a natural organ of ſight, by which we ſee; but the natural organ ſees as little as the artificial.

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The eye is a machine moſt admirably contrived for refracting the rays of light, and forming a diſtinct picture of objects upon the retina; but it ſees neither the object nor the picture. It can form the picture after it is taken out of the head; but no viſion enſues. Even when it is in its proper place, and perfectly ſound, it is well known that an obſtruction in the optic nerve takes away viſion, though the eye has performed all that belong to it.

If any thing more were neceſſary to be ſaid on a point ſo evident, we might obſerve, that if the faculty of ſeeing were in the eye, that of hearing in the ear, and ſo of the other ſenſes, the neceſſary conſequence of this would be, that the thinking principle, which I call myſelf, is not one, but many. But this is contrary to the irreſiſtible conviction of every man. When I ſay, I ſee, I hear, I feel, I remember, this implies that it is one and the ſame ſelf that performs all theſe operations; and as it would be abſurd to ſay, that my memory, another man's imagination, and a third man's reaſon, may make one individual intelligent being, it would be equally abſurd to ſay, that one piece of matter ſeeing, another hearing, and a third feeling, may make one and the ſame percipient being.

Theſe ſentiments are not new; they have occurred to thinking men from early ages. CICERO, in his Tuſculan Queſtions, lib. i. chap. 20. has expreſſed them very diſtinctly. Thoſe who chuſe, may conſult the paſſage.

CHAP.

CHAP. II.

CHAP. II.

Of the Impreſſions on the Organs, Nerves, and Brains.

A Second law of our nature regarding perception is, that we perceive no object, unleſs ſome impreſſion is made upon the organ of ſenſe, either by the immediate application of the object, or by ſome medium which paſſes between the object and the organ.

In two of our ſenſes, to wit, *touch* and *taſte*, there muſt be an immediate application of the object to the organ. In the other three, the object is perceived at a diſtance, but ſtill by means of a medium, by which ſome impreſſion is made upon the organ.

The effluvia of bodies drawn into the noſtrils with the breath, are the medium of ſmell; the undulations of the air, are the medium of hearing; and the rays of light paſſing from viſible objects to the eye, are the medium of ſight. We ſee no object, unleſs rays of light come from it to the eye. We hear not the ſound of any body, unleſs the vibrations of ſome elaſtic medium, occaſioned by the tremulous motion of the ſounding body, reach our ear. We perceive no ſmell, unleſs the effluvia of the ſmelling body enter into the noſtrils. We perceive no taſte, unleſs the ſapid body be applied to the tongue, or ſome part of the organ of taſte. Nor do we perceive any tangible quality of a body, unleſs it touch the hands, or ſome part of our bodies.

Theſe are facts known from experience to hold univerſally and invariably, both in men and

and brutes. By this law of our nature, our powers of perceiving external objects are farther limited and circumſcribed. Nor can we give any other reaſon for this, than that it is the will of our Maker, who knows beſt what powers, and degree of them, are ſuited to our ſtate. We were once in a ſtate, I mean in the womb, wherein our powers of perception were more limited than in the preſent, and, in a future ſtate, they may be more enlarged. CHAP. II.

It is likewiſe a law of our nature, that, in order to our perceiving objects, the impreſſions made upon the organs of ſenſe muſt be communicated to the nerves, and by them to the brain. This is perfectly known to thoſe who know any thing of anatomy.

The nerves are fine cords, which paſs from the brain, or from the ſpinal marrow, which is a production of the brain, to all parts of the body, dividing into ſmaller branches as they proceed, until at laſt they eſcape our eye-ſight: And it is found by experience that all the voluntary and involuntary motions of the body are performed by their means. When the nerves that ſerve any limb, are cut, or tied hard, we have then no more power to move that limb than if it was no part of the body.

As there are nerves that ſerve the muſcular motions, ſo there are others that ſerve the ſeveral ſenſes; and as without the former we cannot move a limb, ſo without the latter we can have no perception.

This train of machinery the wiſdom of God has made neceſſary to our perceiving objects. Various parts of the body concur to it, and each has its own function. *Firſt*, the object either immediately, or by ſome medium,

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um, muſt make an impreſſion on the organ. The organ ſerves only as a medium, by which an impreſſion is made on the nerve; and the nerve ſerves as a medium to make an impreſſion upon the brain. Here the material part ends; at leaſt we can trace it no farther; the reſt is all intellectual.

The proof of theſe impreſſions upon the nerves and brain in perception is this, That, from many obſervations and experiments, it is found, that when the organ of any ſenſe is perfectly ſound, and has the impreſſion made upon it by the object ever ſo ſtrongly; yet, if the nerve which ſerves that organ be cut or tied hard, there is no perception: And it is well known that diſorders in the brain deprive us of the power of perception when both the organ and its nerve are ſound.

There is therefore ſufficient reaſon to conclude, that, in perception, the object produces ſome change in the organ; that the organ produces ſome change upon the nerve; and that the nerve produces ſome change in the brain. And we give the name of an *impreſſion* to thoſe changes, becauſe we have not a name more proper to expreſs, in a general manner, any change produced in a body, by an external cauſe, without ſpecifying the nature of that change. Whether it be preſſure, or attraction, or repulſion, or vibration, or ſomething unknown, for which we have no name, ſtill it may be called an impreſſion. But, with regard to the particular kind of this change or impreſſion, Philoſophers have never been able to diſcover any thing at all.

But, whatever be the nature of thoſe impreſſions upon the organs, nerves, and brain, we

we perceive nothing without them. Experience informs that it is ſo; but we cannot give a reaſon why it is ſo. In the conſtitution of man, perception, by fixed laws of nature, is connected with thoſe impreſſions; but we can diſcover no neceſſary connection. The Supreme Being has ſeen fit to limit our power of perception; ſo that we perceive not without ſuch impreſſions; and this is all we know of the matter. CHAP. II.

This, however, we have reaſon to conclude in general, that as the impreſſions on the organs, nerves, and brain, correſpond exactly to the nature and conditions of the objects by which they are made; ſo our perceptions and ſenſations correſpond to thoſe impreſſions, and vary in kind, and in degree, as they vary. Without this exact correſpondence, the information we receive by our ſenſes would not only be imperfect, as it undoubtedly is, but would be fallacious, which we have no reaſon to think it is.

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CHAP. III.

CHAP. III.

Hypotheſes concerning the Nerves and Brain.

WE are informed by Anatomiſts, that although the two coats which incloſe a nerve, and which it derives from the coats of the brain, are tough and elaſtic; yet the nerve itſelf has a very ſmall degree of conſiſtence, being almoſt like marrow. It has, however, a fibrous texture, and may be divided and ſubdivided, till its fibres eſcape our ſenſes: And as we know ſo very little about the texture of the nerves, there is great room left for thoſe who chuſe to indulge themſelves in conjecture.

The ancients conjectured that the nervous fibres are fine tubes, filled with a very ſubtile ſpirit or vapour, which they called *animal ſpirits*. That the brain is a gland, by which the animal ſpirits are ſecreted from the finer part of the blood, and their continual waſte repaired; and that it is by theſe animal ſpirits that the nerves perform their functions. DES CARTES has ſhown how, by theſe animal ſpirits going and returning in the nerves, muſcular motion, perception, memory, and imagination, are effected. All this he has deſcribed as diſtinctly as if he had been an eye-witneſs of all thoſe operations. But it happens, that the tubular ſtructure of the nerves was never perceived by the human eye, nor ſhewn by the niceſt injections; and all that has been ſaid about animal ſpirits through more than fifteen centuries, is mere conjecture.

Dr. BRIGGS, who was Sir ISAAC NEWTON's maſter in anatomy, was the firſt, as far as I know,

know, who advanced a new ſyſtem concerning the nerves. He conceived them to be ſolid filaments of prodigious tenuity; and this opinion, as it accords better with obſervation, ſeems to have been more generally received ſince his time. As to the manner of performing their office, Dr. Briggs thought, that, like muſical cords, they have vibrations differing according to their length and tenſion. They ſeem, however, very unfit for this purpoſe, on account of their want of tenacity, their moiſture, and being through their whole length in contact with moiſt ſubſtances: So that, although Dr. Briggs wrote a book upon this ſyſtem, called *Nova Viſionis Theoria*, it ſeems not to have been much followed.

Sir Isaac Newton, in all his philoſophical writings, took great care to diſtinguiſh his doctrines, which he pretended to prove by juſt induction, from his conjectures, which were to ſtand or fall, according as future experiments and obſervations ſhould eſtabliſh or refute them. His conjectures he has put in the form of queries, that they might not be received as truths, but be enquired into, and determined according to the evidence to be found for or againſt them. Thoſe who miſtake his queries for a part of his doctrine, do him great injuſtice, and degrade him to the rank of the common herd of Philoſophers, who have in all ages adulterated philoſophy, by mixing conjecture with truth, and their own fancies with the oracles of Nature. Among other queries, this truly great Philoſopher propoſed this, Whether there may not be an elaſtic medium, or æther, immenſely more rare than air, which pervades all bodies, and which is the cauſe of gravitation;

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gravitation; of the refraction and reflection of the rays of light; of the tranſmiſſion of heat, through ſpaces void of air; and of many other phænomena? In the 23d query ſubjoined to his Optics, he puts this queſtion, with regard to the impreſſions made on the nerves and brain in perception, Whether viſion is effected chiefly by the vibrations of this medium, excited in the bottom of the eye by the rays of light, and propagated along the ſolid, pellucid, and uniform capillaments of the optic nerve? And whether hearing is effected by the vibrations of this or ſome other medium, excited by the tremor of the air in the auditory nerves, and propagated along the ſolid, pellucid, and uniform capillaments of thoſe nerves? And ſo with regard to the other ſenſes.

What NEWTON only propoſed as a matter to be enquired into, Dr. HARTLEY conceived to have ſuch evidence, that, in his *Obſervation on Man*, he has deduced, in a mathematical form, a very ample ſyſtem concerning the faculties of the mind, from the doctrine of vibrations, joined with that of aſſociation.

His notion of the vibrations, excited in the nerves, is expreſſed in propoſitions 4. and 5. of the firſt part of his Obſervations on Man. "Propoſition 4. External objects impreſſed "on the ſenſes, occaſion firſt in the nerves on "which they are impreſſed, and then in the "brain, vibrations of the ſmall, and, as one "may ſay, infiniteſimal medullary particles. "Prop. 5. The vibrations mentioned in the "laſt propoſition are excited, propagated, and "kept up, partly by the æther, that is, by a "very ſubtile elaſtic fluid; partly by the uni-"formity, continuity, ſoftneſs, and active

"powers

" powers of the medullary ſubſtance of the
" brain, ſpinal marrow, and nerves."

The modeſty and diffidence with which Dr. HARTLEY offers his ſyſtem to the world, by deſiring his reader " to expect nothing but " hints and conjectures in difficult and obſcure " matters, and a ſhort detail of the principal " reaſons and evidences in thoſe that are clear; " by acknowledging, that he ſhall not be able " to execute, with any accuracy, the proper " method of philoſophiſing, recommended " and followed by Sir ISAAC NEWTON; and " that he will attempt a ſketch only for the " benefit of future enquirers," ſeem to forbid any criticiſm upon it. One cannot, without reluctance, criticiſe what is propoſed in ſuch a manner, and with ſo good intention; yet, as the tendency of this ſyſtem of vibrations is to make all the operations of the mind mere mechaniſm, dependent on the laws of matter and motion; and as it has been held forth by its votaries, *as in a manner demonſtrated*, I ſhall make ſome remarks on that part of the ſyſtem which relates to the impreſſions made on the nerves and brain in perception.

It may be obſerved in general, that Dr. HARTLEY's work conſiſts of a chain of propoſitions, with their proofs and corollaries, digeſted in good order, and in a ſcientific form. A great part of them, however, are, as he candidly acknowledges, conjectures and hints only; yet theſe are mixed with the propoſitions legitimately proved, without any diſtinction. Corollaries are drawn from them, and other propoſitions grounded upon them, which all taken together, make up a ſyſtem. A ſyſtem of this kind reſembles a chain, of which ſome links

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links are abundantly ſtrong, others very weak. The ſtrength of the chain is determined by that of the weakeſt links; for if they give way, the whole falls to pieces, and the weight, ſupported by it, falls to the ground.

Philoſophy has been in all ages adulterated by hypotheſes; that is, by ſyſtems built partly on facts, and much upon conjecture. It is pity that a man of Dr. HARTLEY's knowledge and candour ſhould have followed the multitude in this fallacious tract, after expreſſing his approbation of the proper method of philoſophiſing, pointed out by BACON and NEWTON. The laſt conſidered it as a reproach, when his ſyſtem was called his hypotheſis; and ſays, with diſdain of ſuch imputation, *Hypotheſes non fingo*. And it is very ſtrange that Dr. HARTLEY ſhould not only follow ſuch a method of philoſophiſing himſelf, but that he ſhould direct others in their enquiries to follow it. So he does in propoſition 87. Part 1. where he deduces rules for the aſcertainment of truth, from the rule of falſe, in arithmetic, and from the art of decyphering; and in other places.

As to the vibrations and vibratiuncles, whether of an elaſtic æther, or of the infiniteſimal particles of the brain and nerves, there may be ſuch things for what we know; and men may rationally enquire whether they can find any evidence of their exiſtence; but while we have no proof of their exiſtence, to apply them to the ſolution of phænomena, and to build a ſyſtem upon them, is, what I conceive, we call, building a caſtle in the air.

When men pretend to account for any of the operations of nature, the cauſes aſſigned by them ought, as Sir ISAAC NEWTON has taught us,

us, to have two conditions, otherwiſe they are good for nothing. *Firſt*, they ought to be true, to have a real exiſtence, and not to be barely conjectured to exiſt without proof. *Secondly*, They ought to be ſufficient to produce the effect.

As to the exiſtence of vibratory motions in the medullary ſubſtance of the nerves and brain, the evidence produced is this: *Firſt*, It is obſerved, that the ſenſations of ſeeing and hearing, and ſome ſenſations of touch, have ſome ſhort duration and continuance. *Secondly*, Though there be no direct evidence that the ſenſations of taſte and ſmell, and the greater part of theſe of touch, have the like continuance; yet, ſays the author, analogy would incline one to believe that they muſt reſemble the ſenſations of ſight and hearing in this particular. *Thirdly*, the continuance of all our ſenſations being thus eſtabliſhed, it follows, that external objects impreſs vibratory motions on the medullary ſubſtance of the nerves and brain; becauſe no motion, beſides a vibratory one, can reſide in any part for a moment of time.

This is the chain of proof, in which the firſt link is ſtrong, being confirmed by experience; the ſecond is very weak; and the third ſtill weaker. For other kinds of motion, beſides that of vibration, may have ſome continuance, ſuch as rotation, bending or unbending of a ſpring, and perhaps others which we are unacquainted with; nor we do we know whether it is motion that is produced in the nerves, it may be preſſure, attraction, repulſion, or ſomething we do not know. This indeed is the common refuge of all hypotheſes, that we know

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know no other way in which the phænomena may be produced, and therefore they muſt be produced in this way. There is therefore no proof of vibrations in the infiniteſimal particles of the brain and nerves.

It may be thought that the exiſtence of an elaſtic vibrating æther ſtands on a firmer foundation, having the authority of Sir ISAAC NEWTON. But it ought to be obſerved, that although this great man had formed conjectures about this æther near fifty years before he died, and had it in his eye during that long ſpace as a ſubject of enquiry; yet it does not appear that he ever found any convincing proof of its exiſtence, but conſidered it to the laſt as a queſtion whether there be ſuch an æther or not. In the premonition to the reader, prefixed to the ſecond edition of his Optics, *anno* 1717, he expreſſes himſelf thus with regard to it: "Leſt any one ſhould think that I place "gravity among the eſſential properties of bo- "dies, I have ſubjoined one queſtion concern- "ing its cauſe; a queſtion, I ſay, for I do "not hold it as a thing eſtabliſhed." If, therefore, we regard the authority of Sir ISAAC NEWTON, we ought to hold the exiſtence of ſuch an æther as a matter not eſtabliſhed by proof, but to be examined into by experiments; and I have never heard that, ſince his time, any new evidence has been found of its exiſtence.

But, ſays Dr. HARTLEY, "ſuppoſing the "exiſtence of the æther, and of its properties, "to be deſtitute of all direct evidence, ſtill, "if it ſerves to account for a great variety of "phænomena, it will have an indirect evi- "dence in its favour by this means." There never

never was an hypotheſis invented by an ingeni- CHAP.
ous man which has not this evidence in its III.
favour. The Vortices of DES CARTES, the
Sylphs and Gnomes of Mr. POPE, ſerve to ac-
count for a great variety of phænomena.

When a man has, with labour and ingenuity, wrought up an hypotheſis into a ſyſtem, he contracts a fondneſs for it, which is apt to warp the beſt judgment. This, I humbly think, appears remarkably in Dr. HARTLEY. In his preface, he declares his approbation of the method of philoſophiſing recommended and followed by Sir ISAAC NEWTON; but having firſt deviated from this method in his practice, he is brought at laſt to juſtify this deviation in theory, and to bring arguments in defence of a method diametrically oppoſite to it. "We "admit, ſays he, the key of a cypher to be a "true one, when it explains the cypher com- "pletely." I anſwer, To find the key requires an underſtanding equal or ſuperior to that which made the cypher. This inſtance, therefore, will then be in point, when he who attempts to decypher the works of nature by an hypotheſis, has an underſtanding equal or ſuperior to that which made them. The votaries of hypotheſes have often been challenged to ſhew one uſeful diſcovery in the works of nature that was ever made in that way. If inſtances of this kind could be produced, we ought to conclude that Lord BACON and Sir ISAAC NEWTON have done great diſſervice to philoſophy, by what they have ſaid againſt hypotheſes. But if no ſuch inſtance can be produced, we muſt conclude, with thoſe great men, that every ſyſtem which pretends to account for the phænomena of nature by hypo-

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theſes or conjecture, is ſpurious and illegitimate, and ſerves only to flatter the pride of man with a vain conceit of knowledge which he has not attained.

The author tells us, "that any hypotheſes "that has ſo much plauſibility as to explain a "conſiderable number of facts, helps us to "digeſt theſe facts in proper order, to bring "new ones to light, and to make *experimenta* "*crucis* for the ſake of future enquirers."

Let hypotheſes be put to any of theſe uſes as far as they can ſerve. Let them ſuggeſt experiments, or direct our enquiries; but let juſt induction alone govern our belief.

"The rule of falſe affords an obvious and "ſtrong inſtance of the poſſibility of being led, "with preciſion and certainty, to a true con-"cluſion from a falſe poſition. And it is of "the very eſſence of algebra, to proceed in "the way of ſuppoſition."

This is true; but, when brought to juſtify the accounting for natural phænomena by hypotheſes, is foreign to the purpoſe. When an unknown number, or any unknown quantity is ſought, which muſt have certain conditions, it may be found in a ſcientific manner by the rule of falſe, or by an algebraical analyſis; and, when found, may be ſynthetically demonſtrated to be the number or the quantity ſought, by its anſwering all the conditions required. But it is one thing to find a quantity which ſhall have certain conditions; it is a very different thing to find out the laws by which it pleaſes God to govern the world and produce the phænomena which fall under our obſervation. And we can then only allow ſome weight to this argument in favour of hypotheſes,

hypotheſes, when it can be ſhewn that the cauſe of any one phænomenon in nature has been, or can be found, as an unknown quantity is, by the rule of falſe, or by algebraical analyſis. This, I apprehend, will never be, till the æra arrives, which Dr. HARTLEY ſeems to foretell, "When future generations ſhall "put all kinds of evidences and enquiries into "mathematical forms; and, as it were, re- "duce ARISTOTLE's ten Categories, and Bi- "ſhop WILKIN's forty *Summa Genera* to the "head of quantity alone, ſo as to make ma- "thematics, and logic, natural hiſtory, and "civil hiſtory, natural philoſophy, and philo- "ſophy of all other kinds coincide *omni ex* "*parte*." CHAP. III.

Since Sir ISAAC NEWTON laid down the rules of philoſophiſing in our enquiries into the works of Nature, many Philoſophers have deviated from them in practice; perhaps few have paid that regard to them which they deſerve. But they have met with very general approbation, as being founded in reaſon, and pointing out the only path to the knowledge of Nature's works. Dr. HARTLEY is the only author I have met with who reaſons againſt them, and has taken pains to find out arguments in defence of the exploded method of hypotheſis.

Another condition which Sir ISAAC NEWTON requires in the cauſes of natural things aſſigned by Philoſophers, is, that they be ſufficient to account for the phænomena. Vibrations, and vibratiuncles of the medullary ſubſtance of the nerves and brain, are aſſigned by Dr. HARTLEY to account for all our ſenſations and ideas, and, in a word, for all the operations

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of our minds. Let us conſider very briefly how far they are ſufficient for that purpoſe.

It would be injuſtice to this author to conceive him a Materialiſt. He propoſes his ſentiments with great candour, and they ought not to be carried beyond what his words expreſs. He thinks it a conſequence of his theory, that matter, if it can be endued with the moſt ſimple kinds of ſenſation, might arrive at all that intelligence of which the human mind is poſſeſſed. He thinks that his theory overturns all the arguments that are uſually brought for the immateriality of the ſoul, from the ſubtilty of the internal ſenſes, and of the rational faculty; but he does not take upon him to determine whether matter can be endued with ſenſation or no. He even acknowledges, that matter and motion, however ſubtilly divided and reaſoned upon, yield nothing more than matter and motion ſtill; and therefore he would not be any way interpreted ſo as to oppoſe the immateriality of the ſoul.

It would, therefore, be unreaſonable to require that his theory of vibrations ſhould, in the proper ſenſe, account for our ſenſations. It would, indeed, be ridiculous in any man to pretend that thought of any kind muſt neceſſarily reſult from motion, or that vibrations in the nerves muſt neceſſarily produce thought, any more than the vibrations of a pendulum. Dr. HARTLEY diſclaims this way of thinking, and therefore it ought not to be imputed to him. All that he pretends is, that, in the human conſtitution, there is a certain connection between vibrations in the medullary ſubſtance of the nerves and brain, and the thoughts of the mind; ſo that the laſt depend entirely upon

upon the firſt, and every kind of thought in the mind ariſes in conſequence of a correſponding vibration, or vibratiuncle in the nerves and brain. Our ſenſations ariſe from vibrations, and our ideas from vibratiuncles, or miniature vibrations; and he comprehends, under theſe two words of *ſenſations* and *ideas*, all the operations of the mind. CHAP. III.

But how can we expect any proof of the connection between vibrations and thought, when the exiſtence of ſuch vibrations was never proved. The proof of their connection cannot be ſtronger than the proof of their exiſtence: For as the author acknowledges, that we cannot infer the exiſtence of the thoughts from the exiſtence of the vibrations, it is no leſs evident, that we cannot infer the exiſtence of vibrations from the exiſtence of our thoughts. The exiſtence of both muſt be known before we can know their connection. As to the exiſtence of our thoughts, we have the evidence of conſciouſneſs; a kind of evidence that never was called in queſtion. But as to the exiſtence of vibrations in the medullary ſubſtance of the nerves and brain, no proof has yet been brought.

All therefore we have to expect from this hypotheſis, is, that, in vibrations conſidered abſtractly, there ſhould be a variety in kind and degree, which tallies ſo exactly with the varieties of the thoughts they are to account for, as may lead us to ſuſpect ſome connection between the one and the other. If the diviſions and ſubdiviſions of thought be found to run parallel with the diviſions and ſubdiviſions of vibrations, this would give that kind of plauſibility to the hypotheſis of their connection,

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tion, which we commonly expect even in a mere hypotheſis; but we do not find even this.

For, to omit all thoſe thoughts and operations which the author comprehends under the name of *ideas*, and which he thinks are connected with vibratiuncles; to omit the perception of external objects, which he comprehends under the name of *ſenſations*; to omit the ſenſations, properly ſo called, which accompany our paſſions and affections, and to confine ourſelves to the ſenſations which we have by means of our external ſenſes, we can perceive no correſpondence between the variety we find in their kinds and degrees, and that which may be ſuppoſed in vibrations.

We have five ſenſes, whoſe ſenſations differ totally in kind. By each of theſe, excepting perhaps that of hearing, we have a variety of ſenſations, which differ ſpecifically, and not in degree only. How many taſtes and ſmells are there which are ſpecifically different, each of them capable of all degrees of ſtrength and weakneſs? Heat and cold, roughneſs and ſmoothneſs, hardneſs and ſoftneſs, pain and pleaſure, are ſenſations of touch that differ in kind, and each has an endleſs variety of degrees. Sounds have the qualities of acute and grave, loud and low, with all different degrees of each. The varieties of colour are many more than we have names to expreſs. How ſhall we find varieties in vibrations correſponding to all this variety of ſenſations which we have by our five ſenſes only?

I know two qualities of vibrations in an uniform elaſtic medium, and I know no more. They may be quick or ſlow in various degrees, and they may be ſtrong or weak in various degrees;

grees; but I cannot find any diviſion of our ſenſations that will make them tally with thoſe diviſions of vibrations. If we had no other ſenſations but thoſe of hearing, the theory would anſwer well; for ſounds are either acute or grave, which may anſwer to quick or ſlow vibrations; or they are loud or low, which anſwer to ſtrong or weak vibrations. But then we have no variety of vibrations correſponding to the immenſe variety of ſenſations which we have by ſight, ſmell, taſte, and touch.

Dr. HARTLEY has endeavoured to find out other two qualities of vibrations; to wit, that they may primarily affect one part of the brain or another, and that they may vary in their direction, according as they enter by different external nerves; but theſe ſeem to be added to make a number: For, as far as we know, vibrations in an uniform elaſtic ſubſtance ſpread over the whole, and in all directions. However, that we may be liberal, we ſhall grant him four different kinds of vibrations, each of them having as many degrees as he pleaſes. Can he or any man reduce all our ſenſations to four kinds? We have five ſenſes, and by each of them a variety of ſenſations, more than ſufficient to exhauſt all the varieties we are able to conceive in vibrations.

Dr. HARTLEY, indeed, was ſenſible of the difficulty of finding vibrations to ſuit all the variety of our ſenſations. His extenſive knowledge of phyſiology and pathology could yield him but a feeble aid; and therefore he is often reduced to the neceſſity of heaping ſuppoſition upon ſupoſition, conjecture upon conjecture, to give ſome credibility to his hypotheſis; and, in ſeeking out vibrations which may correſpond with

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with the ſenſations of one ſenſe, he ſeems to forget that thoſe muſt be omitted which have been appropriated to another.

Philoſophers have accounted in ſome degree for our various ſenſations of ſound, by the vibrations of elaſtic air. But it is to be obſerved, *firſt*, That we know that ſuch vibrations do really exiſt; and, *ſecondly*, That they tally exactly with the moſt remarkable phænomena of ſound. We cannot, indeed, ſhew how any vibration ſhould produce the ſenſation of ſound. This muſt be reſolved into the will of God, or into ſome cauſe altogether unknown. But we know, that as the vibration is ſtrong or weak, the ſound is loud or low. We know, that as the vibration is quick or ſlow, the ſound is acute or grave. We can point out that relation of ſynchronous vibrations which produces harmony or diſcord, and that relation of ſucceſſive vibrations which produces melody: And all this is not conjectured, but proved by a ſufficient induction. This account of ſounds, therefore, is philoſophical; although, perhaps, there may be many things relating to ſound that we cannot account for, and of which the cauſes remain latent. The connections deſcribed in this branch of philoſophy are the work of God, and not the fancy of men.

If any thing ſimilar to this could be ſhown in accounting for all our ſenſations by vibrations in the medullary ſubſtance of the nerves and brain, it would deſerve a place in ſound philoſophy. But, when we are told of vibrations in a ſubſtance, which no man could ever prove to have vibrations, or to be capable of them; when ſuch imaginary vibrations are brought

brought to account for all our ſenſations, though we can perceive no correſpondence in their variety of kind and degree to the variety of ſenſations, the connections deſcribed in ſuch a ſyſtem are the creatures of human imagination, not the work of God. CHAP. III.

The rays of light make an impreſſion upon the optic nerves; but they make none upon the auditory or olfactory. The vibrations of the air make an impreſſion upon the auditory nerves; but none upon the optic or the olfactory. The effluvia of bodies make an impreſſion upon the olfactory nerves; but make none upon the optic or auditory. No man has been able to give a ſhadow of reaſon for this. While this is the caſe, is it not better to confeſs our ignorance of the nature of thoſe impreſſions made upon the nerves and brain in perception, than to flatter our pride with the conceit of knowledge which we have not, and to adulterate philoſophy with the ſpurious brood of hypotheſes?

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False Conclusions drawn from the Impressions before mentioned.

SOME Philosophers among the ancients, as well as among the moderns, imagined that man is nothing but a piece of matter so curiously organised, that the impressions of external objects produce in it sensation, perception, remembrance, and all the other operations we are conscious of. This foolish opinion could only take its rise from observing the constant connection which the Author of Nature hath established between certain impressions made upon our senses, and our perception of the objects by which the impression is made; from which they weakly inferred, that those impressions were the proper efficient causes of the corresponding perception.

But no reasoning is more fallacious than this, that because two things are always conjoined, therefore one must be the cause of the other. Day and night have been joined in a constant succession since the beginning of the world; but who is so foolish as to conclude from this, that day is the cause of night, or night the cause of the following day? There is indeed nothing more ridiculous than to imagine that any motion or modification of matter should produce thought.

If one should tell of a telescope so exactly made as to have the power of seeing; of a whispering gallery that had the power of hearing; of a cabinet so nicely framed as to have the

the power of memory; or of a machine ſo delicate as to feel pain when it was touched; ſuch abſurdities are ſo ſhocking to common ſenſe that they would not find belief even among ſavages; yet it is the ſame abſurdity to think that the impreſſions of external objects upon the machine of our bodies, can be the real efficient cauſe of thought and perception.

Paſſing this therefore as a notion too abſurd to admit of reaſoning; another concluſion very generally made by Philoſophers, is, that in perception an impreſſion is made upon the mind as well as upon the organ, nerves, and brain. ARISTOTLE, as was before obſerved, thought that the form or image of the object perceived, enters by the organ of ſenſe, and ſtrikes upon the mind. Mr. HUME gives the name of impreſſions to all our perceptions, to all our ſenſations, and even to the objects which we perceive. Mr. LOCKE affirms very poſitively, that the ideas of external objects are produced in our minds by impulſe, "that be-" ing the only way we can conceive bodies to "operate in." It ought, however, to be obſerved, in juſtice to Mr. LOCKE, that he retracted this notion in his firſt letter to the Biſhop of WORCESTER, and promiſed in the next edition of his Eſſay to have that paſſage rectified; but either from forgetfulneſs in the author, or negligence in the printer, the paſſage remains in all the ſubſequent editions I have ſeen.

There is no prejudice more natural to man, than to conceive of the mind as having ſome ſimilitude to body in its operations. Hence men have been prone to imagine, that as bodies are put in motion by ſome impulſe or impreſſion

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preſſion made upon them by contiguous bodies; ſo the mind is made to think and to perceive by ſome impreſſion made upon it, or ſome impulſe given to it by contiguous objects. If we have ſuch a notion of the mind as HOMER had of his gods, who might be bruiſed or wounded with ſwords and ſpears, we may then underſtand what is meant by impreſſions made upon it by a body: But if we conceive the mind to be immaterial, of which I think we have very ſtrong proofs, we ſhall find it difficult to affix a meaning to *impreſſions made upon it.*

There is a figurative meaning of impreſſions on the mind which is well authoriſed, and of which we took notice in the obſervations made on that word; but this meaning applies only to objects that are intereſting. To ſay that an object which I ſee with perfect indifference makes an impreſſion upon my mind, is not, as I apprehend, good Engliſh. If Philoſophers mean no more but that I ſee the object, why ſhould they invent an improper phraſe to expreſs what every man knows how to expreſs in plain Engliſh?

But it is evident, from the manner in which this phraſe is uſed by modern Philoſophers, that they mean not barely to expreſs by it, my perceiving an object, but to explain the manner of perception. They think that the object perceived acts upon the mind, in ſome way ſimilar to that in which one body acts upon another, by making an impreſſion it. The impreſſion upon the mind is conceived to be ſomething wherein the mind is altogether paſſive, and has ſome effect produced in it by the object. But this is a hypotheſis which contradicts the common ſenſe of mankind, and which ought not to be admitted without proof.

When

When I look upon the wall of my room, the wall does not act at all, nor is capable of acting; the perceiving it is an act or operation in me. That this is the common apprehenſion of mankind with regard to perception, is evident from the manner of expreſſing it in all languages. CHAP. IV.

The vulgar give themſelves no trouble how they perceive objects, they expreſs what they are conſcious of, and they expreſs it with propriety; but Philoſophers have an avidity to know how we perceive objects; and conceiving ſome ſimilitude between a body that is put in motion, and a mind that is made to perceive, they are led to think, that as the body muſt receive ſome impulſe to make it move, ſo the mind muſt receive ſome impulſe or impreſſion to make it perceive. This analogy ſeems to be confirmed, by obſerving that we perceive objects only when they make ſome impreſſion upon the organs of ſenſe, and upon the nerves and brain; but it ought to be obſerved, that ſuch is the nature of body that it cannot change its ſtate, but by ſome force impreſſed upon it. This is not the nature of mind. All that we know about it ſhows it to be in its nature living and active, and to have the power of perception in its conſtitution, but ſtill within thoſe limits to which it is confined by the laws of Nature.

It appears, therefore, that this phraſe of the mind's having impreſſions made upon it by corporeal objects in perception, is either a phraſe without any diſtinct meaning, and contrary to the propriety of the Engliſh language, or it is grounded upon an hypotheſis which is deſtitute of proof. On that account, though we grant that

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that in perception there is an impreſſion made upon the organ of ſenſe, and upon the nerves and brain, we do not admit that the object makes any impreſſion upon the mind.

There is another concluſion drawn from the impreſſions made upon the brain in perception, which I conceive to have no ſolid foundation, though it has been adopted very generally by Philoſophers. It is, that by the impreſſions made on the brain, images are formed of the object perceived; and that the mind, being ſeated in the brain as its chamber of preſence, immediately perceives thoſe images only, and has no perception of the external object but by them. This notion of our perceiving external objects, not immediately, but in certain images or ſpecies of them conveyed by the ſenſes, ſeems to be the moſt ancient philoſophical hypotheſis we have on the ſubject of perception, and to have with ſmall variations retained its authority to this day.

ARISTOTLE, as was before obſerved, maintained, that the ſpecies, images or forms of external objects, coming from the object, are impreſſed on the mind. The followers of DEMOCRITUS and EPICURUS held the ſame thing, with regard to ſlender films of ſubtile matter coming from the object, that ARISTOTLE did with regard to his immaterial ſpecies or forms.

ARISTOTLE thought every object of human underſtanding enters at firſt by the ſenſes; and that the notions got by them are by the powers of the mind refined and ſpiritualized, ſo as at laſt to become objects of the moſt ſublime and abſtracted ſciences. PLATO, on the other hand, had a very mean opinion of all the knowledge we get by the ſenſes. He thought it did not deſerve

deſerve the name of knowledge, and could not be the foundation of ſcience; becauſe the objects of ſenſe are individuals only, and are in a conſtant fluctuation. All ſcience, according to him, muſt be employed about thoſe eternal and immutable ideas, which exiſted before the objects of ſenſe, and are not liable to any change. In this there was an eſſential difference between the ſyſtems of theſe two Philoſophers. The notion of eternal and immutable ideas, which PLATO borrowed from the Pythagorean ſchool, was totally rejected by ARISTOTLE, who held it as a maxim, that there is nothing in the intellect, which was not at firſt in the ſenſes. CHAP. IV.

But, notwithſtanding this great difference in thoſe two ancient ſyſtems, they might both agree as to the manner in which we perceive objects by our ſenſes: And that they did ſo, I think, is probable; becauſe ARISTOTLE, as far as I know, neither takes notice of any difference between himſelf and his maſter upon this point, nor lays claim to his theory of the manner of our perceiving objects as his own invention. It is ſtill more probable from the hints which PLATO gives in the ſeventh book of his Republic, concerning the manner in which we perceive the objects of ſenſe; which he compares to perſons in a deep and dark cave, who ſee not external objects themſelves but only their ſhadows, by a light let into the cave through a ſmall opening.

It ſeems, therefore, probable that the Pythagoreans and Platoniſts agreed with the Peripatetics in this general theory of perception; to wit, that the objects of ſenſe are perceived only

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only by certain images, or ſhadows of them, let into the mind, as into a *camera obſcura*.

The notions of the ancients were very various with regard to the ſeat of the ſoul. Since it has been diſcovered, by the improvements in anatomy, that the nerves are the inſtruments of perception, and of the ſenſations accompanying it, and that the nerves ultimately terminate in the brain, it has been the general opinion of Philoſophers that the brain is the ſeat of the ſoul; and that ſhe perceives the images that are brought there, and external things only by means of them.

DES CARTES, obſerving that the pineal gland is the only part of the brain that is ſingle, all the other parts being double, and thinking that the ſoul muſt have one ſeat, was determined by this to make that gland the ſoul's habitation, to which, by means of the animal ſpirits, intelligence is brought of all objects that affect the ſenſes.

Others have not thought proper to confine the habitations of the ſoul to the pineal gland, but to the brain in general, or to ſome part of it, which they call the *ſenſorium*. Even the great NEWTON favoured this opinion, though he propoſes it only as a query, with that modeſty which diſtinguiſhed him no leſs than his great genius. "Is not, ſays he, the ſenſori-
"um of animals the place where the ſentient
"ſubſtance is preſent, and to which the ſen-
"ſible ſpecies of things are brought through
"the nerves and brain, that there they may
"be perceived by the mind preſent in that
"place? And is there not an incorporeal, liv-
"ing, intelligent, and omnipreſent Being,
"who, in infinite ſpace, as if it were in his
"ſenſorium,

" ſenſorium, intimately perceives things them-
" ſelves, and comprehends them perfectly, as
" being preſent to them; of which things,
" that principle in us, which perceives and
" thinks, diſcerns only, in its little ſenſorium,
" the images brought to it through the organs
" of the ſenſes?"

His great friend Dr. SAMUEL CLARKE adopted the ſame ſentiment with more confidence. In his papers to LEIBNITZ, we find the following paſſages: " Without being pre-
" ſent to the images of the things perceived,
" it (the ſoul) could not poſſibly perceive them.
" A living ſubſtance can only there perceive
" where it is preſent, either to the things them-
" ſelves, (as the omnipreſent God is to the
" whole univerſe), or to the images of things,
" (as the ſoul of man is in its proper ſenſory).
" Nothing can any more act, or be acted upon,
" where it is not preſent, than it can be
" where it is not. We are ſure the ſoul can-
" not perceive what it is not preſent to, be-
" cauſe nothing can act, or be acted upon,
" where it is not."

Mr. LOCKE expreſſes himſelf ſo upon this point, that, for the moſt part, one would imagine, that he thought that the ideas, or images of things, which he believed to be the immediate objects of perception, are impreſſions upon the mind itſelf; yet, in ſome paſſages, he rather places them in the brain, and makes them to be perceived by the mind there preſent. " There are ſome ideas, ſays he, which
" have admittance only through one ſenſe;
" and if the organs or the nerves, which are
" the conduits to convey them from without
" to their audience in the brain, the mind's

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"presence room, if I may so call it, are so "disordered as not to perform their function, "they have no postern to be admitted by.

"There seems to be a constant decay of all "our ideas, even of those that are struck deep- "est. The pictures drawn in our minds are "laid in fading colours. Whether the tem- "per of the brain makes this difference, that "in some it retains the characters drawn on "it like marble, in others like free-stone, and "in others little better than sand, I shall not "enquire."

From these passages of Mr. LOCKE, and others of a like nature, it is plain, that he thought that there are images of external objects conveyed to the brain. But whether he thought with DES CARTES and NEWTON, that the images in the brain are perceived by the mind there present, or that they are imprinted on the mind itself, is not so evident.

Now, with regard to this hypothesis, there are three things that deserve to be considered, because the hypothesis leans upon them; and, if any one of them fail, it must fall to the ground. The *first* is, That the soul has its seat, or, as Mr. LOCKE calls it, its presence room in the brain. The *second*, That there are images formed in the brain of all the objects of sense. The *third*, that the mind or soul perceives these images in the brain; and that it perceives not external objects immediately, but only perceives them by means of those images.

As to the *first* point, that the soul has its seat in the brain, this, surely, is not so well established, as that we can safely build other principles upon it. There have been various opinions and much disputation about the place of

of ſpirits; whether they have a place? and if they have, how they occupy that place? After men had fought in the dark about thoſe points for ages, the wiſer part ſeem to have left off diſputing about them, as matters beyond the reach of the human faculties. CHAP. IV.

As to the *ſecond* point, that images of all the objects of ſenſe are formed in the brain, we may venture to affirm, that there is no proof nor probability of this, with regard to any of the objects of ſenſe; and that with regard to the greater part of them, it is words without any meaning.

We have not the leaſt evidence that the image of any external object is formed in the brain. The brain has been diſſected times innumerable by the niceſt Anatomiſts; every part of it examined by the naked eye, and with the help of microſcopes; but no veſtige of an image of any external object was ever found. The brain ſeems to be the moſt improper ſubſtance that can be imagined for receiving or retaining images, being a ſoft moiſt medullary ſubſtance.

But how are theſe images formed? or whence do they come? Says Mr. Locke, the organs of ſenſe and nerves convey them from without. This is juſt the Ariſtotelian hypotheſis of ſenſible ſpecies, which modern Philoſophers have been at great pains to refute, and which muſt be acknowledged to be one of the moſt unintelligible parts of the Peripatetic ſyſtem. Thoſe who conſider ſpecies of colour, figure, ſound, and ſmell, coming from the object, and entering by the organs of ſenſe, as a part of the ſcholaſtic jargon, long ago diſcarded from ſound philoſophy, ought to have diſcarded images in the brain along with them. There never was

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a ſhadow of argument brought by any author, to ſhow that an image of any external object ever entered by any of the organs of ſenſe.

That external objects make ſome impreſſion on the organs of ſenſe, and by them on the nerves and brain, is granted; but that thoſe impreſſions reſemble the objects they are made by, ſo as that they may be called images of the objects, is moſt improbable. Every hypotheſis that has been contrived ſhews that there can be no ſuch reſemblance; for neither the motions of animal ſpirits, nor the vibrations of elaſtick chords, or of elaſtic æther, or of the infiniteſimal particles of the nerves, can be ſuppoſed to reſemble the objects by which they are excited.

We know, that, in viſion, an image of the viſible object is formed in the bottom of the eye by the rays of light. But we know alſo, that this image cannot be conveyed to the brain, becauſe the optic nerve, and all the parts that ſurround it, are opaque and impervious to the rays of light; and there is no other organ of ſenſe in which any image of the object is formed.

It is farther to be obſerved, that, with regard to ſome objects of ſenſe, we may underſtand what is meant by an image of them imprinted on the brain; but, with regard to moſt objects of ſenſe, the phraſe is abſolutely unintelligible, and conveys no meaning at all. As to objects of ſight, I underſtand what is meant by an image of their figure in the brain: But how ſhall we conceive an image of their colour where there is abſolute darkneſs? And as to all other objects of ſenſe, except figure and colour, I am unable to conceive what is meant

meant by an image of them. Let any man say, what he means by an image of heat and cold, an image of hardneſs or ſoftneſs, an image of ſound, or ſmell, or taſte. The word *image*, when applied to theſe objects of ſenſe, has abſolutely no meaning. Upon what a weak foundation, then, does this hypotheſis ſtand, when it ſuppoſes, that images of all the objects of ſenſe are imprinted on the brain, being conveyed thither by the conduits of the organs and nerves.

The *third* point in this hypotheſis, is, That the mind perceives the images in the brain, and external objects only by means of them. This is as improbable, as that there are ſuch images to be perceived. If our powers of perception be not altogether fallacious, the objects we perceive are not in our brain, but without us. We are ſo far from perceiving images in the brain, that we do not perceive our brain at all; nor would any man ever have known that he had a brain, if anatomy had not diſcovered, by diſſection, that the brain is a conſtituent part of the human body.

To ſum up what has been ſaid with regard to the organs of perception, and the impreſſions made upon our nerves and brain. It is a law of our nature, eſtabliſhed by the will of the Supreme Being, that we perceive no external object but by means of the organs given us for that purpoſe. But theſe organs do not perceive. The eye is the organ of ſight, but it ſees not. A teleſcope is an artificial organ of ſight. The eye is a natural organ of ſight, but it ſees as little as the teleſcope. We know how the eye forms a picture of the viſible object upon the retina; but how this picture makes

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makes us see the object we know not; and if experience had not informed us that such a picture is necessary to vision, we should never have known it. We can give no reason why the picture on the retina should be followed by vision, while a like picture on any other part of the body produces nothing like vision.

It is likewise a law of our nature, that we perceive not external objects, unless certain impressions be made by the object upon the organ, and by means of the organ upon the nerves and brain. But of the nature of those impressions we are perfectly ignorant; and though they are conjoined with perception by the will of our Maker, yet it does not appear that they have any necessary connection with it in their own nature, far less that they can be the proper efficient cause of it. We perceive, because God has given us the power of perceiving, and not because we have impressions from objects. We perceive nothing without those impressions, because our Maker has limited and circumscribed our powers of perception, by such laws of Nature as to his wisdom seemed meet, and such as suited our rank in his creation.

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Of Perception.

IN ſpeaking of the impreſſions made on our organs in perception, we build upon facts borrowed from anatomy and phyſiology, for which we have the teſtimony of our ſenſes. But being now to ſpeak of perception itſelf, which is ſolely an act of the mind, we muſt appeal to another authority. The operations of our minds are known not by ſenſe, but by conſciouſneſs, the authority of which is as certain and as irreſiſtible as that of ſenſe.

In order, however, to our having a diſtinct notion of any of the operations of our own minds, it is not enough that we be conſcious of them; for all men have this conſciouſneſs: It is farther neceſſary that we attend to them while they are exerted, and reflect upon them with care, while they are recent and freſh in our memory. It is neceſſary that, by employing ourſelves frequently in this way, we get the habit of this attention and reflection; and therefore, for the proof of facts which I ſhall have occaſion to mention upon this ſubject, I can only appeal to the reader's own thoughts, whether ſuch facts are not agreeable to what he is conſcious of in his own mind.

If, therefore, we attend to that act of our mind which we call the perception of an external object of ſenſe, we ſhall find in it theſe three things. *Firſt*, Some conception or notion of the object perceived. *Secondly*, A ſtrong and irreſiſtible conviction and belief of its preſent

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ſent exiſtence. And, *thirdly*, That this conviction and belief are immediate, and not the effect of reaſoning.

Firſt, It is impoſſible to perceive an object without having ſome notion or conception of that which we perceive. We may indeed conceive an object which we do not perceive; but when we perceive the object, we muſt have ſome conception of it at the ſame time; and we have commonly a more clear and ſteady notion of the object while we perceive it, than we have from memory or imagination when it is not perceived. Yet, even in perception, the notion which our ſenſes give of the object may be more or leſs clear, more or leſs diſtinct, in all poſſible degrees.

Thus we ſee more diſtinctly an object at a ſmall than at a great diſtance. An object at a great diſtance is ſeen more diſtinctly in a clear than in a foggy day. An object ſeen indiſtinctly with the naked eye, on account of its ſmallneſs, may be ſeen diſtinctly with a microſcope. The objects in this room will be ſeen by a perſon in the room leſs and leſs diſtinctly as the light of the day fails; they paſs through all the various degrees of diſtinctneſs according to the degrees of the light, and at laſt, in total darkneſs, they are not ſeen at all. What has been ſaid of the objects of ſight is ſo eaſily applied to the objects of the other ſenſes, that the application may be left to the reader.

In a matter ſo obvious to every perſon capable of reflection, it is neceſſary only farther to obſerve, that the notion which we get of an object, merely by our external ſenſe, ought not to be confounded with that more ſcientific notion

notion which a man, come to the years of understanding, may have of the same object, by attending to its various attributes, or to its various parts, and their relation to each other, and to the whole. Thus the notion which a child has of a jack for roasting meat, will be acknowledged to be very different from that of a man who understands its construction, and perceives the relation of the parts to one another, and to the whole. The child sees the jack and every part of it as well as the man: The child, therefore, has all the notion of it which sight gives; whatever there is more in the notion which the man forms of it, must be derived from other powers of the mind, which may afterwards be explained. This observation is made here only, that we may not confound the operations of different powers of the mind, which, by being always conjoined after we grow up to understanding, are apt to pass for one and the same. CHAP. V.

Secondly, In perception we not only have a notion more or less distinct of the object perceived, but also an irresistible conviction and belief of its existence. This is always the case when we are certain that we perceive it. There may be a perception so faint and indistinct, as to leave us in doubt whether we perceive the object or not. Thus, when a star begins to twinkle as the light of the sun withdraws, one may, for a short time, think he sees it, without being certain, until the perception acquires some strength and steadiness. When a ship just begins to appear in the utmost verge of the horizon, we may at first be dubious whether we perceive it or not: But when the perception is in any degree clear and steady, there remains

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remains no doubt of its reality; and when the reality of the perception is ascertained, the existence of the object perceived can no longer be doubted.

By the laws of all nations, in the most solemn judicial trials wherein mens fortunes and lives are at stake, the sentence passes according to the testimony of eye or ear witnesses of good credit. An upright judge will give a fair hearing to every objection that can be made to the integrity of a witness, and allow it to be possible that he may be corrupted; but no judge will ever suppose, that witnesses may be imposed upon by trusting to their eyes and ears: And if a sceptical counsel should plead against the testimony of the witnesses, that they had no other evidence for what they declared, but the testimony of their eyes and ears, and that we ought not to put so much faith in our senses, as to deprive men of life or fortune upon their testimony; surely no upright judge would admit a plea of this kind. I believe no counsel, however sceptical, ever dared to offer such an argument; and, if it was offered, it would be rejected with disdain.

Can any stronger proof be given, that it is the universal judgment of mankind that the evidence of sense is a kind of evidence which we may securely rest upon in the most momentous concerns of mankind: That it is a kind of evidence against which we ought not to admit any reasoning; and therefore, that to reason either for or against it is an insult to common sense?

The whole conduct of mankind, in the daily occurrences of life, as well as the solemn procedure of judicatories in the trial of causes civil

civil and criminal, demonſtrates this. I know only of two exceptions that may be offered againſt this being the univerſal belief of mankind. CHAP. V.

The firſt exception is that of ſome lunatics who have been perſuaded of things that ſeem to contradict the clear teſtimony of their ſenſes. It is ſaid there have been lunatics and hypochondriacal perſons, who ſeriouſly believed themſelves to be made of glaſs; and, in conſequence of this, lived in continual terror of having their brittle frame ſhivered into pieces.

All I have to ſay to this is, that our minds, in our preſent ſtate, are, as well as our bodies, liable to ſtrange diſorders; and as we do not judge of the natural conſtitution of the body from the diſorders or diſeaſes to which it is ſubject from accidents, ſo neither ought we to judge of the natural powers of the mind from its diſorders, but from its ſound ſtate. It is natural to man, and common to the ſpecies, to have two hands and two feet; yet I have ſeen a man, and a very ingenious one, who was born without either hands or feet. It is natural to man to have faculties ſuperior to thoſe of brutes; yet we ſee ſome individuals, whoſe faculties are not equal to thoſe of many brutes; and the wiſeſt man may, by various accidents, be reduced to this ſtate. General rules that regard thoſe whoſe intellects are ſound, are not overthrown by inſtances of men whoſe intellects are hurt by any conſtitutional or accidental diſorder.

The other exception that may be made to the principle we have laid down, is that of ſome Philoſophers who have maintained, that the

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the teſtimony of ſenſe is fallacious, and therefore ought never to be truſted. Perhaps it might be a ſufficient anſwer to this to ſay, that there is nothing ſo abſurd which ſome Philoſophers have not maintained. It is one thing to profeſs a doctrine of this kind, another ſeriouſly to believe it, and to be governed by it in the conduct of life. It is evident, that a man who did not believe his ſenſes could not keep out of harm's way an hour of his life; yet, in all the hiſtory of philoſophy, we never read of any ſceptic that ever ſtepped into fire or water becauſe he did not believe his ſenſes, or that ſhowed in the conduct of life, leſs truſt in his ſenſes than other men have. This gives us juſt ground to apprehend, that philoſophy was never able to conquer that natural belief which men have in their ſenſes; and that all their ſubtile reaſonings againſt this belief were never able to perſuade themſelves.

It appears, therefore, that the clear and diſtinct teſtimony of our ſenſes carries irreſiſtible conviction along with it, to every man in his right judgment.

I obſerved, *thirdly*, That this conviction is not only irreſiſtible, but it is immediate; that is, it is not by a train of reaſoning and argumentation that we come to be convinced of the exiſtence of what we perceive; we aſk no argument for the exiſtence of the object, but that we perceive it; perception commands our belief upon its own authority, and diſdains to reſt its authority upon any reaſoning whatſoever.

The conviction of a truth may be irreſiſtible, and yet not immediate. Thus my conviction that the three angles of every plain triangle are

are equal to two right angles, is irresistible, but it is not immediate: I am convinced of it by demonstrative reasoning. There are other truths in mathematics of which we have not only an irresistible, but an immediate conviction. Such are the axioms. Our belief of the axioms in mathematics is not grounded upon argument. Arguments are grounded upon them, but their evidence is discerned immediately by the human understanding.

It is, no doubt, one thing to have an immediate conviction of a self-evident axiom; it is another thing to have an immediate conviction of the existence of what we see; but the conviction is equally immediate and equally irresistible in both cases. No man thinks of seeking a reason to believe what he sees; and before we are capable of reasoning, we put no less confidence in our senses than after. The rudest savage is as fully convinced of what he sees, and hears, and feels, as the most expert Logician. The constitution of our understanding determines us to hold the truth of a mathematical axiom as a first principle, from which other truths may be deduced, but it is deduced from none; and the constitution of our power of perception determines us to hold the existence of what we distinctly perceive as a first principle, from which other truths may be deduced, but it is deduced from none. What has been said of the irresistible and immediate belief of the existence of objects distinctly perceived, I mean only to affirm with regard to persons so far advanced in understanding, as to distinguish objects of mere imagination from things which have a real existence. Every man knows that he may have a notion of Don Quixote, or of Garagantua, without

any

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any belief that such persons every existed: and that of Julius Cæsar and Oliver Cromwell, he has not only a notion, but a belief that they did really exist. But whether children, from the time that they begin to use their senses, make a distinction between things which are only conceived or imagined, and things which really exist, may be doubted. Until we are able to make this distinction, we cannot properly be said to believe or to disbelieve the existence of any thing. The belief of the existence of any thing seems to suppose a notion of existence; a notion too abstract perhaps to enter into the mind of an infant. I speak of the power of perception in those that are adult, and of a sound mind, who believe that there are some things which do really exist; and that there are many things conceived by themselves, and by others, which have no existence. That such persons do invariably ascribe existence to every thing which they distinctly perceive, without seeking reasons or arguments for doing so, is perfectly evident from the whole tenor of human life.

The account I have given of our perception of external objects, is intended as a faithful delineation of what every man come to years of understanding, and capable of giving attention to what passes in his own mind, may feel in himself. In what manner the notion of external objects, and the immediate belief of their existence, is produced by means of our senses, I am not able to show, and I do not pretend to show. If the power of perceiving external objects in certain circumstances, be a part of the original constitution of the human mind, all attempts to account for it will be vain:

vain: No other account can be given of the conſtitution of things, but the will of him that made them: as we can give no reaſon why matter is extended and inert, why the mind thinks, and is conſcious of its thoughts, but the will of him who made both; ſo I ſuſpect we can give no other reaſon why, in certain circumſtances, we perceive external objects, and in others do not.

The Supreme Being intended, that we ſhould have ſuch knowledge of the material objects that ſurround us, as is neceſſary in order to our ſupplying the wants of nature, and avoiding the dangers to which we are conſtantly expoſed; and he has admirably fitted our powers of perception to this purpoſe. If the intelligence we have of external objects were to be got by reaſoning only, the greateſt part of men would be deſtitute of it; for the greateſt part of men hardly ever learn to reaſon; and in infancy and childhood no man can reaſon: Therefore, as this intelligence of the objects that ſurround us, and from which we may receive ſo much benefit or harm, is equally neceſſary to children and to men, to the ignorant, and to the learned, God in his wiſdom conveys it to us in a way that puts all upon a level. The information of the ſenſes is as perfect, and gives as full conviction to the moſt ignorant, as to the moſt learned.

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What it is to account for a Phænomenon in Nature.

AN object placed at a proper distance, and in a good light, while the eyes are shut, is not perceived at all; but no sooner do we open our eyes upon it, than we have, as it were by inspiration, a certain knowledge of its existence, of its colour, figure, and distance. This is a fact which every one knows. The vulgar are satisfied with knowing the fact, and give themselves no trouble about the cause of it: But a Philosopher is impatient to know how this event is produced, to account for it, or assign its cause

This avidity to know the causes of things is the parent of all philosophy true and false. Men of speculation place a great part of their happiness in such knowledge. *Felix qui potuit rerum cognoscere causas*, has always been a sentiment of human nature. But as in the pursuit of other kinds of happiness men often mistake the road; so in none have they more frequently done it, than in the philosophical pursuit of the causes of things.

It is a dictate of common sense, that the causes we assign of appearances ought to be real, and not fictions of human imagination. It is likewise self-evident, that such causes ought to be adequate to the effects that are conceived to be produced by them.

That those who are less accustomed to inquiries into the causes of natural appearances, may the better understand what it is to shew the cause

cauſe of ſuch appearances, or to account for them; I ſhall borrow a plain inſtance of a phænomenon or appearance, of which a full and ſatisfactory account has been given. The phænomenon is this: That a ſtone, or any heavy body, falling from a height, continually increaſes its velocity as it deſcends; ſo that if it acquire a certain velocity in one ſecond of time, it will have twice that velocity at the end of two ſeconds, thrice at the end of three ſeconds, and ſo on in proportion to the time. This accelerated velocity in a ſtone falling muſt have been obſerved from the beginning of the world; but the firſt perſon, as far as we know, who accounted for it in a proper and philoſophical manner, was the famous GALILEO; after innumerable falſe and fictitious accounts had been given of it. CHAP. VI.

He obſerved, that bodies once put in motion continue that motion with the ſame velocity, and in the ſame direction, until they be ſtopped or retarded, or have the direction of their motion altered, by ſome force impreſſed upon them. This property of bodies is called their *inertia*, or inactivity; for it implies no more than that bodies cannot of themſelves change their ſtate from reſt to motion, or from motion to reſt. He obſerved alſo, that gravity acts conſtantly and equally upon a body, and therefore will give equal degrees of velocity to a body in equal times. From theſe principles, which are known from experience to be fixed laws of Nature, GALILEO ſhewed, that heavy bodies muſt deſcend with a velocity uniformly accelerated, as by experience they are found to do.

For if the body by its gravitation acquire a certain velocity at the end of one ſecond, it

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would, though its gravitation ſhould ceaſe that moment, continue to go on with that velocity; but its gravitation continues, and will in another ſecond give it an additional velocity, equal to that which it gave in the firſt; ſo that the whole velocity at the end of two ſeconds will be twice as great as at the end of one. In like manner, this velocity being continued through the third ſecond, and having the ſame addition by gravitation as in any of the preceding, the whole velocity at the end of the third ſecond will be thrice as great as at the end of the firſt, and ſo on continually.

We may here obſerve, that the cauſes aſſigned of this phænomenon are two: *Firſt*, That bodies once put in motion retain their velocity and their direction until it is changed by ſome force impreſſed upon them. *Secondly*, That the weight or gravitation of a body is always the ſame. Theſe are laws of Nature, confirmed by univerſal experience, and therefore are not feigned but true cauſes; then, they are preciſely adequate to the effect aſcribed to them; they muſt neceſſarily produce that very motion in deſcending bodies which we find to take place; and neither more nor leſs. The account therefore given of this phænomenon is juſt and philoſophical; no other will ever be required or admitted by thoſe who underſtand this.

It ought likewiſe to be obſerved, that the cauſes aſſigned of this phænomenon are things of which we can aſſign no cauſe. Why bodies once put in motion continue to move; why bodies conſtantly gravitate towards the earth with the ſame force, no man has been able to ſhow: Theſe are facts confirmed by univerſal experience,

perience, and they must no doubt have a cause; but their cause is unknown, and we call them laws of Nature, because we know no cause of them but the will of the Supreme Being. CHAP. VI.

But may we not attempt to find the cause of gravitation, and of other phænomena which we call laws of Nature? No doubt we may. We know not the limit which has been set to human knowledge, and our knowledge of the works of God can never be carried too far: But, supposing gravitation to be accounted for, by an æthereal elastic medium for instance, this can only be done, *first*, by proving the existence and the elasticity of this medium; and, *secondly*, by showing, that this medium must necessarily produce that gravitation which bodies are known to have. Until this be done, gravitation is not accounted for, nor is its cause known; and when this is done, the elasticity of this medium will be considered as a law of Nature, whose cause is unknown. The chain of natural causes has, not unfitly, been compared to a chain hanging down from heaven: A link that is discovered supports the links below it, but it must itself be supported; and that which supports it must be supported, until we come to the first link, which is supported by the throne of the Almighty. Every natural cause must have a cause, until we ascend to the first cause, which is uncaused, and operates not by necessity but by will.

By what has been said in this Chapter, those who are but little acquainted with philosophical inquiries may see what is meant by accounting for a phænomenon, or showing its cause, which ought to be well understood, in order to

CHAP. VI. judge of the theories by which Philoſophers have attempted to account for our perception of external objects by the ſenſes.

CHAP. VII.

Sentiments of Philoſophers about the Perception of external Objects; and, firſt,

Of the Theory of Father MALEBRANCHE.

HOW the correſpondence is carried on between the thinking principle within us, and the material world without us, has always been found a very difficult problem to thoſe Philoſophers who think themſelves obliged to account for every phænomenon in nature. Many Philoſophers, ancient and modern, have employed their invention to diſcover how we are made to perceive external objects by our ſenſes: And there appears to be a very great uniformity in their ſentiments in the main, notwithſtanding their variations in particular points.

PLATO illuſtrates our manner of perceiving the objects of ſenſe, in this manner: He ſuppoſes a dark ſubterraneous cave, in which men lie bound in ſuch a manner, that they can direct their eyes only to one part of the cave: Far behind, there is a light, ſome rays of which come over a wall to that part of the cave which is before the eyes of our priſoners. A number of perſons, variouſly employed, paſs between them and the light, whoſe ſhadows are ſeen by the priſoners, but not the perſons themſelves.

In

In this manner, that Philoſopher conceived, that, by our ſenſes, we perceive the ſhadows of things only, and not things themſelves. He ſeems to have borrowed his notions on this ſubject from the Pythagoreans, and they very probably from PYTHAGORAS himſelf. If we make allowance for PLATO's allegorical genius, his ſentiments on this ſubject correſpond very well with thoſe of his ſcholar ARISTOTLE, and of the Peripatetics. The ſhadows of PLATO may very well repreſent the ſpecies and phantaſms of the Peripatetic ſchool, and the ideas and impreſſions of modern Philoſophers.

Two thouſand years after PLATO, Mr. LOCKE, who ſtudied the operations of the human mind ſo much, and with ſo great ſucceſs, repreſents our manner of perceiving external objects by a ſimilitude very much reſembling that of the cave. "Methinks, ſays he, the "underſtanding is not much unlike a cloſet "wholly ſhut from light, with only ſome little "opening left, to let in external viſible reſem- "blances or ideas of things without. Would "the pictures coming into ſuch a dark room "but ſtay there, and lie ſo orderly as to be "found upon occaſion, it would very much "reſemble the underſtanding of a man, in re- "ference to all objects of ſight, and the ideas "of them."

PLATO's ſubterranean cave, and Mr. LOCKE's dark cloſet, may be applied with eaſe to all the ſyſtems of perception that have been invented: For they all ſuppoſe that we perceive not external objects immediately, and that the immediate objects of perception are only certain ſhadows of the external objects. Thoſe ſhadows or images, which we immediately

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ately perceive, were by the ancients called *ſpecies*, *forms*, *phantaſms*. Since the time of DES CARTES, they have commonly been called *ideas*, and by Mr. HUME *impreſſions*. But all Philoſophers, from PLATO to Mr. HUME, agree in this, That we do not perceive external objects immediately, and that the immediate object of perception muſt be ſome image preſent to the mind. So far there appears an unanimity, rarely to be found among Philoſophers on ſuch abſtruſe points.

If it ſhould be aſked, Whether, according to the opinion of Philoſophers, we perceive the images or ideas only, and infer the exiſtence and qualities of the external object from what we perceive in the image? Or, whether we really perceive the external object as well as its image? The anſwer to this queſtion is not quite obvious.

On the one hand, Philoſophers, if we except BERKELEY and HUME, believe the exiſtence of external objects of ſenſe, and call them objects of perception, though not immediate objects. But what they mean by a mediate object of perception I do not find clearly explained; whether they ſuit their language to popular opinion, and mean that we perceive external objects in that figurative ſenſe, in which we ſay that we perceive an abſent friend when we look on his picture; or whether they mean, that really, and without a figure, we perceive both the external object and its idea in the mind. If the laſt be their meaning, it would follow, that, in every inſtance of perception, there is a double object perceived: That I perceive, for inſtance, one ſun in the heavens, and another in my own mind. But I do not find that they affirm this; and

and as it contradicts the experience of all mankind, I will not impute it to them. CHAP. VII.

It seems, therefore, that their opinion is, That we do not really perceive the external object, but the internal only; and that when they speak of perceiving external objects, they mean it only in a popular or in a figurative sense, as above explained. Several reasons lead me to think this to be the opinion of Philosophers, beside what is mentioned above. *First*, If we do really perceive the external object itself, there seems to be no necessity, no use, for an image of it. *Secondly*, Since the time of DES CARTES, Philosophers have very generally thought that the existence of external objects of sense requires proof, and can only be proved from the existence of their ideas. *Thirdly*, The way in which Philosophers speak of ideas, seems to imply that they are the only objects of perception.

Having endeavoured to explain what is common to Philosophers in accounting for our perception of external objects, we shall give some detail of their differences.

The ideas by which we perceive external objects, are said by some to be the ideas of the Deity; but it has been more generally thought, that every man's ideas are proper to himself, and are either in his mind, or in his *sensorium*, where the mind is immediately present. The *first* is the theory of MALEBRANCHE; the *second* we shall call the common theory.

With regard to that of MALEBRANCHE, it seems to have some affinity with the Platonic notion of ideas, but is not the same. PLATO believed that there are three eternal first principles, from which all things have their

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their origin; matter, ideas, and an efficient cauſe. Matter is that of which all things are made, which, by all the ancient Philoſophers, was conceived to be eternal. Ideas are forms without matter of every kind of things which can exiſt; which forms were alſo conceived by PLATO to be eternal and immutable, and to be the models or patterns by which the efficient cauſe, that is the Deity, formed every part of this Univerſe. Theſe ideas were conceived to be the ſole objects of ſcience, and indeed of all true knowledge. While we are impriſoned in the body, we are prone to give attention to the objects of ſenſe only; but theſe being individual things, and in a conſtant fluctuation, being indeed ſhadows rather than realities, cannot be the object of real knowledge. All ſcience is employed, not about individual things, but about things univerſal and abſtract from matter. Truth is eternal and immutable, and therefore muſt have for its object eternal and immutable ideas; theſe we are capable of contemplating in ſome degree even in our preſent ſtate, but not without a certain purification of mind, and abſtraction from the objects of ſenſe. Such, as far as I am able to comprehend, were the ſublime notions of PLATO, and probably of PYTHAGORAS.

The Philoſophers of the Alexandrian ſchool, commonly called the latter Platoniſts, ſeem to have adopted the ſame ſyſtem; but with this difference, that they made the eternal ideas not to be a principle diſtinct from the Deity, but to be in the divine intellect, as the objects of thoſe conceptions which the divine mind muſt from all eternity have had, not only of every thing which he has made, but of every poſſible exiſtence,

exiſtence, and of all the relations of things: By a proper purification and abſtraction from the objects of ſenſe, we may be in ſome meaſure united to the Deity, and in the eternal light be enabled to diſcern the moſt ſublime intellectual truths.

Theſe Platonic notions, grafted upon Chriſtianity, probably gave riſe to the ſect called *Myſtics*, which, though in its ſpirit and principles extremely oppoſite to the Peripatetic, yet was never extinguiſhed, but ſubſiſts to this day.

Many of the Fathers of the Chriſtian church have a tincture of the tenets of the Alexandrian ſchool; among others St. AUGUSTINE. But it does not appear, as far as I know, that either PLATO, or the latter Platoniſts, or St. AUGUSTINE, or the Myſtics, thought that we perceive the objects of ſenſe in the divine ideas. They had too mean a notion of our perception of ſenſible objects to aſcribe to it ſo high an origin. This theory, therefore, of our perceiving the objects of ſenſe in the ideas of the Deity, I take to be the invention of Father MALEBRANCHE himſelf. He indeed brings many paſſages of St. AUGUSTINE to countenance it, and ſeems very deſirous to have that Father of his party. But in thoſe paſſages, though the Father ſpeaks in a very high ſtrain of God's being the light of our minds, of our being illuminated immediately by the eternal light, and uſes other ſimilar expreſſions; yet he ſeems to apply thoſe expreſſions only to our illumination in moral and divine things, and not to the perception of objects by the ſenſes. Mr. BAYLE imagines that ſome traces of this opinion of MALEBRANCHE are to be found in AMELIUS the

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the Platoniſt, and even in DEMOCRITUS; but his authorities ſeem to be ſtrained.

MALEBRANCHE, with a very penetrating genius, entered into a more minute examination of the powers of the human mind, than any one before him. He had the advantage of the diſcoveries made by DES CARTES, whom he followed without ſlaviſh attachment.

He lays it down as a principle admitted by all Philoſophers, and which could not be called in queſtion, that we do not perceive external objects immediately, but by means of images or ideas of them preſent to the mind. "I "ſuppoſe, ſays he, that every one will grant "that we perceive not the objects that are "without us immediately, and of themſelves. "We ſee the ſun, the ſtars, and an infinity "of objects without us; and it is not at all "likely that the ſoul ſallies out of the body, "and, as it were, takes a walk through the "heavens to contemplate all thoſe objects: "She ſees them not, therefore, by themſelves; "and the immediate object of the mind, when "it ſees the ſun, for example, is not the ſun, "but ſomething which is intimately united to "the ſoul; and it is that which I call an idea: "So that by the word *idea*, I underſtand no-"thing elſe here but that which is the imme-"diate object, or neareſt to the mind, when "we perceive any object. It ought to be "carefully obſerved, that, in order to the "mind's perceiving any object, it is abſolutely "neceſſary that the idea of that object be actu-"ally preſent to it. Of this it is not poſſible "to doubt. The things which the ſoul per-"ceives are of two kinds. They are either "in the ſoul, or they are without the ſoul:

"Thoſe

" Thoſe that are in the ſoul are its own " thoughts, that is to ſay, all its different mo- " difications. The ſoul has no need of ideas " for perceiving theſe things. But with re- " gard to things without the ſoul, we cannot " perceive them but by means of ideas."

Having laid this foundation, as a principle common to all Philoſophers, and which admits of no doubt, he proceeds to enumerate all the poſſible ways by which the ideas of ſenſible objects may be preſented to the mind: Either, *firſt*, they come from the bodies which we perceive; or, *ſecondly*, the ſoul has the power of producing them in itſelf; or, *thirdly*, they are produced by the Deity, either in our creation, or occaſionally as there is uſe for them; or, *fourthly*, the ſoul has in itſelf virtually and eminently, as the ſchools ſpeak, all the perfections which it perceives in bodies; or, *fifthly*, the ſoul is united with a Being poſſeſſed of all perfection, who has in himſelf the ideas of all created things.

This he takes to be a complete enumeration of all the poſſible ways in which the ideas of external objects may be preſented to our minds: He employs a whole chapter upon each; refuting the four firſt, and confirming the laſt by various arguments. The Deity, being always preſent to our minds in a more intimate manner than any other being, may, upon occaſion of the impreſſions made on our bodies, diſcover to us as far as he thinks proper, and according to fixed laws, his own ideas of the object; and thus we ſee all things in God, or in the divine ideas.

However viſionary this ſyſtem may appear on a ſuperficial view, yet when we conſider, that

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that he agreed with the whole tribe of Philoſophers in conceiving ideas to be the immediate objects of perception, and that he found inſuperable difficulties, and even abſurdities, in every other hypotheſis concerning them, it will not appear ſo wonderful that a man of very great genius ſhould fall into this; and probably it pleaſed ſo devout a man the more, that it ſets in the moſt ſtriking light our dependence upon God, and his continual preſence with us.

He diſtinguiſhed, more accurately than any Philoſopher had done before, the objects which we perceive from the ſenſations in our own minds, which, by the laws of Nature, always accompany the perception of the object. As in many things, ſo particularly in this, he has great merit: For this, I apprehend, is a key that opens the way to a right underſtanding both of our external ſenſes, and of other powers of the mind. The vulgar confound ſenſation with other powers of the mind, and with their objects, becauſe the purpoſes of life do not make a diſtinction neceſſary. The confounding of theſe in common language has led Philoſophers, in one period, to make thoſe things external which really are ſenſations in our own minds; and, in another period, running as is uſual into the contrary extreme, to make every thing almoſt to be a ſenſation or feeling in our minds.

It is obvious, that the ſyſtem of MALEBRANCHE leaves no evidence of the exiſtence of a material world, from what we perceive by our ſenſes; for the divine ideas, which are the objects immediately perceived, were the ſame before the world was created. MALEBRANCHE was too acute not to diſcern this conſequence of his

his ſyſtem, and too candid not to acknowledge it: He fairly owns it, and endeavours to make advantage of it, reſting the complete evidence we have of the exiſtence of matter upon the authority of revelation: He ſhews, that the arguments brought by DES CARTES to prove the exiſtence of a material world, though as good as any that reaſon could furniſh, are not perfectly concluſive; and though he acknowledges with DES CARTES, that we feel a ſtrong propenſity to believe the exiſtence of a material world, yet he thinks this is not ſufficient; and that to yield to ſuch propenſities without evidence, is to expoſe ourſelves to perpetual deluſion. He thinks, therefore, that the only convincing evidence we have of the exiſtence of a material world is, that we are aſſured by revelation that God created the heavens and the earth, and that the Word was made fleſh: He is ſenſible of the ridicule to which ſo ſtrange an opinion may expoſe him among thoſe who are guided by prejudice; but, for the ſake of truth, he is willing to bear it. But no author, not even Biſhop BERKELEY, hath ſhown more clearly, that, either upon his own ſyſtem, or upon the common principles of Philoſophers with regard to ideas, we have no evidence left, either from reaſon or from our ſenſes, of the exiſtence of a material world. It is no more than juſtice to Father MALEBRANCHE to acknowledge, that Biſhop BERKELEY's arguments are to be found in him in their whole force.

Mr. NORRIS, an Engliſh divine, eſpouſed the ſyſtem of MALEBRANCHE, in his Eſſay towards the theory of the ideal or intellectual world, publiſhed in two volumes 8*vo*, *anno* 1701.

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1701. This author has made a feeble effort to supply a defect which is to be found not in MALEBRANCHE only, but in almoſt all the authors who have treated of ideas; I mean, to prove their exiſtence. He has employed a whole chapter to prove, that material things cannot be an immediate object of perception. His arguments are theſe: 1*ſt*, They are without the mind, and therefore there can be no union between the object and the perception. 2*dly*, They are diſproportioned to the mind, and removed from it by the whole diameter of being. 3*dly*, Becauſe, if material objects were immediate objects of perception, there could be no phyſical ſcience; things neceſſary and immutable being the only objects of ſcience. 4*thly*, If material things were perceived by themſelves, they would be a true light to our minds, as being the intelligible form of our underſtandings, and conſequently perfective of them, and indeed ſuperior to them.

MALEBRANCHE's ſyſtem was adopted by many devout people in France of both ſexes; but it ſeems to have had no great currency in other countries. Mr. LOCKE wrote a ſmall tract againſt it, which is found among his poſthumous works: But whether it was written in haſte, or after the vigour of his underſtanding was impaired by age, there is leſs of ſtrength and ſolidity in it, than in moſt of his writings. The moſt formidable antagoniſt MALEBRANCHE met with was in his own country; ANTONY ARNAULD, doctor of the Sorbonne, and one of the acuteſt writers the Janſeniſts have to boaſt of, though that ſect has produced many. MALEBRANCHE was a Jeſuit, and the antipathy between the Jeſuits and

and Janſeniſts left him no room to expect quarter from his learned antagoniſt. Thoſe who chuſe to ſee this ſyſtem attacked on the one hand, and defended on the other, with ſubtilty of argument, and elegance of expreſſion, and on the part of ARNAULD with much wit and humour, may find ſatisfaction by reading MALEBRANCHE's Enquiry after truth; ARNAULD's book of true and falſe ideas; MALEBRANCHE's Defence; and ſome ſubſequent replies and defences. In controverſies of this kind, the aſſailant commonly has the advantage, if they are not unequally matched; for it is eaſier to overturn all the theories of Philoſophers upon this ſubject, than to defend any one of them. Mr. BAYLE makes a very juſt remark upon this controverſy, that the arguments of Mr. ARNAULD againſt the ſyſtem of MALEBRANCHE were often unanſwerable, but they were capable of being retorted againſt his own ſyſtem; and his ingenious antagoniſt knew well how to uſe this defence.

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Of the common Theory of Perception, and of the Sentiments of the PERIPATETICS, *and of* DES CARTES.

THIS theory in general is, that we perceive external objects only by certain images which are in our minds, or in the ſenſorium to which the mind is immediately preſent. Philoſophers in different ages have differed both in the names they have given to thoſe images, and in their notions concerning them. It would be a laborious taſk to enumerate all their variations, and perhaps would not requite the labour. I ſhall only give a ſketch of the principal differences with regard to their names and their nature.

By ARISTOTLE and the Peripatetics, the images preſented to our ſenſes were called *ſenſible ſpecies or forms;* thoſe preſented to the memory or imagination were called *phantaſms;* and thoſe preſented to the intellect were called *intelligible ſpecies;* and they thought, that there can be no perception, no imagination, no intellection, without ſpecies or phantaſms. What the ancient Philoſophers called ſpecies, ſenſible and intelligible, and phantaſms, in later times, and eſpecially ſince the time of DES CARTES, came to be called by the common name of *ideas*. The Carteſians divided our ideas into three claſſes, thoſe of *ſenſation*, of *imagination*, and of *pure intellection*. Of the objects of ſenſation and imagination, they thought the images are in the brain, but of objects

objects that are incorporeal, the images are in the understanding, or pure intellect. CHAP. VIII.

Mr. LOCKE, taking the word *idea* in the same sense as DES CARTES had done before him, to signify whatever is meant by phantasm, notion or species, divides ideas into those of *sensation*, and those of *reflection;* meaning by the first, the ideas of all corporeal objects, whether perceived, remembered, or imagined; by the second, the ideas of the powers and operations of our minds. What Mr. LOCKE calls ideas, Mr. HUME divides into two distinct kinds, *impressions* and *ideas*. The difference betwixt these, he says, consists in the degree of force and liveliness with which they strike upon the mind. Under *impressions* he comprehends all our sensations, passions and emotions, as they make their first appearance in the soul. By *ideas* he means the faint images of these in thinking and reasoning.

Dr. HARTLEY gives the same meaning to ideas as Mr. HUME does, and what Mr. HUME calls impressions he calls sensations; conceiving our sensations to be occasioned by vibrations of the infinitesimal particles of the brain, and ideas by miniature vibrations, or vibratiuncles. Such differences we find among Philosophers, with regard to the name of those internal images of objects of sense, which they hold to be the immediate objects of perception.

We shall next give a short detail of the sentiments of the Peripatetics and Cartesians, of LOCKE, BERKELEY, and HUME, concerning them.

ARISTOTLE seems to have thought that the soul consists of two parts, or, rather, that we have two souls, the animal and the rational;

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or, as he calls them, the ſoul and the intellect. To the *firſt*, belong the ſenſes, memory, and imagination; to the *laſt*, judgment, opinion, belief, and reaſoning. The firſt we have in common with brute animals; the laſt is peculiar to man. The animal ſoul he held to be a certain form of the body, which is inſeparable from it, and periſhes at death. To this ſoul the ſenſes belong: And he defines a ſenſe to be that which is capable of receiving the ſenſible forms, or ſpecies of objects, without any of the matter of them; as wax receives the form of the ſeal without any of the matter of it. The forms of ſound, of colour, of taſte, and of other ſenſible qualities, are in like manner received by the ſenſes.

It ſeems to be a neceſſary conſequence of ARISTOTLE's doctrine, that bodies are conſtantly ſending forth, in all directions, as many different kinds of forms without matter as they have different ſenſible qualities; for the forms of colour muſt enter by the eye, the forms of ſound by the ear, and ſo of the other ſenſes. This accordingly was maintained by the followers of ARISTOTLE, though, not as far as I know, expreſsly mentioned by himſelf. They diſputed concerning the nature of thoſe forms of ſpecies, whether they were real beings or non-entities; and ſome held them to be of an intermediate nature between the two. The whole doctrine of the Peripatetics and ſchoolmen concerning forms, ſubſtantial and accidental, and concerning the tranſmiſſion of ſenſible ſpecies from objects of ſenſe to the mind, if it be at all intelligible, is ſo far above my comprehenſion, that I ſhould perhaps do it injuſtice, by entering into it more minutely.

MALE-

MALEBRANCHE, in his *Recherche de la Verité*, has employed a chapter to ſhew, that material objects do not ſend forth ſenſible ſpecies of their ſeveral ſenſible qualities.

The great revolution which DES CARTES produced in philoſophy, was the effect of a ſuperiority of genius, aided by the circumſtances of the times. Men had, for more than a thouſand years, looked up to ARISTOTLE as an oracle in philoſophy. His authority was the teſt of truth. The ſmall remains of the Platonic ſyſtem were confined to a few Myſtics, whoſe principles and manner of life drew little attention. The feeble attempts of RAMUS, and of ſome others, to make improvements in the ſyſtem, had little effect. The Peripatetic doctrines were ſo interwoven with the whole ſyſtem of ſcholaſtic theology, that to diſſent from ARISTOTLE was to alarm the Church. The moſt uſeful and intelligible parts, even of ARISTOTLE's writings, were neglected, and philoſophy was become an art of ſpeaking learnedly, and diſputing ſubtilely, without producing any invention of uſe in human life. It was fruitful of words, but barren of works, and admirably contrived for drawing a veil over human ignorance, and putting a ſtop to the progreſs of knowledge, by filling men with a conceit that they knew every thing. It was very fruitful alſo in controverſies; but for the moſt part they were controverſies about words, or about things of no moment, or things above the reach of the human faculties: And the iſſue of them was what might be expected, that the contending parties fought, without gaining or loſing an inch of ground, till they were weary of the diſpute, or their attention was called off to ſome other ſubject.

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Such was the philoſophy of the ſchools of Europe, during many ages of darkneſs and barbariſm that ſucceeded the decline of the Roman empire; ſo that there was a great need of a reformation in philoſophy as well as in religion. The light began to dawn at laſt; a ſpirit of enquiry ſprang up, and men got the courage to doubt of the dogmas of ARISTOTLE, as well as of the decrees of Popes. The moſt important ſtep in the reformation of religion was to deſtroy the claim of infallibility, which hindered men from uſing their judgment in matters of religion: and the moſt important ſtep in the reformation of philoſophy was to deſtroy the authority, of which ARISTOTLE had ſo long had peaceable poſſeſſion. The laſt had been attempted by Lord BACON and others, with no leſs zeal than the firſt by LUTHER and CALVIN.

DES CARTES knew well the defects of the prevailing ſyſtem which had begun to loſe its authority. His genius enabled him, and his ſpirit prompted him, to attempt a new one. He had applied much to the mathematical ſciences, and had made conſiderable improvement in them. He wiſhed to introduce that perſpicuity and evidence into other branches of philoſophy which he found in them.

Being ſenſible how apt we are to be led aſtray by prejudices of education, he thought the only way to avoid error, was, to reſolve to doubt of every thing, and hold every thing to be uncertain; even thoſe things which he had been taught to hold as moſt certain, until he had ſuch clear and cogent evidence as compelled his aſſent.

In

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In this ſtate of univerſal doubt, that which firſt appeared to him to be clear and certain, was his own exiſtence. Of this he was certain, becauſe he was conſcious that he thought, that he reaſoned, and that he doubted. He uſed this argument, therefore, to prove his own exiſtence, *cogito, ergo ſum.* This he conceived to be the firſt of all truths, the foundation-ſtone upon which the whole fabric of human knowledge is built, and on which it muſt reſt. And as ARCHIMEDES thought, that if he had one fixed point to reſt his engines upon, he could move the earth; ſo DES CARTES, charmed with the diſcovery of one certain principle, by which he emerged from the ſtate of univerſal doubt, believed that this principle alone would be a ſufficient foundation on which he might build the whole ſyſtem of ſcience. He ſeems therefore to have taken no great trouble to examine whether there might not be other firſt principles, which, on account of their own light and evidence, ought to be admitted by every man of ſound judgment. The love of ſimplicity, ſo natural to the mind of man, led him to apply the whole force of his mind to raiſe the fabric of knowledge upon this one principle, rather than ſeek a broader foundation.

Accordingly, he does not admit the evidence of ſenſe to be a firſt principle, as he does that of conſciouſneſs. The arguments of the ancient ſceptics here occurred to him, that our ſenſes often deceive us, and therefore ought never to be truſted on their own authority: That in ſleep, we often ſeem to ſee and hear things which we are convinced to have had no exiſtence. But that which chiefly led DES CARTES

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CARTES to think that he ought not to truſt to his ſenſes without proof of their veracity, was, that he took it for granted, as all Philoſophers had done before him, that he did not perceive external objects themſelves, but certain images of them in his own mind, called *ideas*. He was certain, by conſciouſneſs, that he had the ideas of ſun and moon, earth and ſea; but how could he be aſſured that there really exiſted external objects like to theſe ideas?

Hitherto he was uncertain of every thing but of his own exiſtence, and the exiſtence of the operations and ideas of his own mind. Some of his diſciples, it is ſaid, remained at this ſtage of his ſyſtem, and got the name of Egoiſts. They could not find evidence in the ſubſequent ſtages of his progreſs. But DES CARTES reſolved not to ſtop here; he endeavoured to prove, by a new argument, drawn from his idea of a Deity, the exiſtence of an infinitely perfect Being, who made him, and all his faculties. From the perfection of this Being, he inferred that he could be no deceiver; and therefore concluded, that his ſenſes, and the other faculties he found in himſelf, are not fallacious, but may be truſted, when a proper uſe is made of them.

The ſyſtem of DES CARTES is, with great perſpicuity and acuteneſs, explained by himſelf in his writings, which ought to be conſulted by thoſe who would underſtand it.

The merit of DES CARTES cannot be eaſily conceived by thoſe who have not ſome notion of the Peripatetic ſyſtem, in which he was educated. To throw off the prejudices of education, and to create a ſyſtem of nature, totally different

different from that which had ſubdued the understanding of mankind, and kept it in ſubjection for ſo many centuries, required an uncommon force of mind. CHAP. VIII.

The world which DES CARTES exhibits to our view is not only in its ſtructure very different from that of the Peripatetics, but is, as we may ſay, compoſed of different materials.

In the old ſyſtem, every thing was, by a kind of metaphyſical ſublimation, reſolved into principles ſo myſterious, that it may be a queſtion whether they were words without meaning, or were notions too refined for human underſtanding.

All that we obſerve in nature, is, according to ARISTOTLE, a conſtant ſucceſſion of the operations of generation and corruption. The principles of generation are matter and form. The principle of corruption is privation. All natural things are produced or generated by the union of matter and form; matter being, as it were, the mother, and form the father. As to matter, or the firſt matter, as it is called, it is neither ſubſtance nor accident; it has no quality or property; it is nothing actually, but every thing potentially. It has ſo ſtrong an appetite for form, that it is no ſooner diveſted of one form, than it is clothed with another, and is equally ſuſceptible of all forms ſucceſſively. It has no nature, but only the capacity of having any one.

This is the account which the Peripatetics give of the firſt matter. The other principle of generation is *form*, *act*, *perfection*; for theſe three words ſignify the ſame thing. But we muſt not conceive form to conſiſt in the figure, ſize, arrangement, or motion of the parts of matter.

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matter. Theſe, indeed, are accidental forms, by which things artificial are formed: But every production of Nature has a ſubſtantial orm, which, joined to matter, makes it to be what it is. The ſubſtantial form is a kind of informing ſoul, which gives the thing its ſpecific nature, and all its qualities, powers, and activity. Thus the ſubſtantial form of heavy bodies, is that which makes them deſcend; of light bodies, that which makes them aſcend. The ſubſtantial form of gold, is that which gives it its ductility, its fuſibility, its weight, its colour, and all its qualities; and the ſame is to be underſtood of every natural production. A change in the accidental form of any body, is alteration only; but a change in the ſubſtantial form, is generation and corruption: It is corruption with reſpect to the ſubſtantial form, of which the body is deprived: It is generation, with reſpect to the ſubſtantial form that ſucceeds. Thus when a horſe dies and turns to duſt, the philoſophical account of the phænomenon is this: A certain portion of the *materia prima*, which was joined to the ſubſtantial form of a horſe is deprived of it by privation, and in the ſame inſtant is inveſted with the ſubſtantial form of earth. As every ſubſtance muſt have a ſubſtantial form, there are ſome of thoſe forms inanimate, ſome vegetative, ſome animal, and ſome rational. The three former kinds can only ſubſiſt in matter; but the laſt, according to the ſchoolmen, is immediately created by God, and infuſed into the body, making one ſubſtance with it, while they are united; yet capable of being disjoined from the body, and of ſubſiſting by itſelf.

Such

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Such are the principles of natural things in the Peripatetic ſyſtem. It retains ſo much of the ancient Pythagorean doctrine, that we cannot aſcribe the invention of it ſolely to ARISTOTLE, although he no doubt made conſiderable alterations in it. The firſt matter was probably the ſame in both ſyſtems, and was in both held to be eternal. They differed more about form. The Pythagoreans and Platoniſts held forms or ideas, as they called them, to be eternal, immutable, and ſelf-exiſtent. ARISTOTLE maintained, that they were not eternal, nor ſelf-exiſtent. On the other hand, he did not allow them to be produced, but educed from matter; yet he held them not to be actually in the matter from which they are educed, but potentially only. But theſe two ſyſtems differed leſs from one another, than that of DES CARTES did from both.

In the world of DES CARTES, we meet with two kinds of beings only, to wit, body and mind; the firſt the object of our ſenſes, the other of conſciouſneſs; both of them things of which we have a diſtinct apprehenſion, if the human mind be capable of diſtinct apprehenſion at all. To the firſt, no qualities are aſcribed but extenſion, figure, and motion; to the laſt, nothing but thought, and its various modifications, of which we are conſcious. He could obſerve no common attribute, no reſembling feature in the attributes of body and mind, and therefore concluded them to be diſtinct ſubſtances, and totally of a different nature; and that body from its very nature is inanimate and inert, incapable of any kind of thought or ſenſation, or of producing any change or alteration in itſelf.

DES

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Des Cartes muſt be allowed the honour of being the firſt who drew a diſtinct line between the material and intellectual world, which, in all the old ſyſtems, were ſo blended together, that it was impoſſible to ſay where the one ends and the other begins. How much this diſtinction hath contributed to the improvements of modern times, in the philoſophy both of body and of mind, is not eaſy to ſay.

One obvious conſequence of this diſtinction was, that accurate reflection on the operations of our own mind is the only way to make any progreſs in the knowledge of it. Malebranche, Locke, Berkeley, and Hume, were taught this leſſon by Des Cartes; and to it we owe their moſt valuable diſcoveries in this branch of philoſophy. The analogical way of reaſoning concerning the powers of the mind from the properties of body, which is the ſource of almoſt all the errors on this ſubject, and which is ſo natural to the bulk of mankind, was as contrary to the principles of Des Cartes, as it was agreeable to the principles of the old philoſophy. We may therefore truly ſay, that, in that part of philoſophy which relates to the mind, Des Cartes laid the foundation, and put us into that tract, which all wiſe men now acknowledge to be the only one in which we can expect ſucceſs.

With regard to phyſics, or the philoſophy of body, if Des Cartes had not the merit of leading men into the right tract, we muſt allow him that of bringing them out of a wrong one. The Peripatetics, by aſſigning to every ſpecies of body a particular ſubſtantial form, which produces, in an unknown manner, all the effects we obſerve in it, put a ſtop to all improvement

provement in this branch of philoſophy. Gravity and levity, fluidity and hardneſs, heat and cold, were qualities ariſing from the ſubſtantial form of the bodies to which they belonged. Generation and corruption, ſubſtantial forms, and occult qualities, were always at hand, to reſolve every phænomenon. This philoſophy, therefore, inſtead of accounting for any of the phænomena of Nature, contrived only to give learned names to their unknown cauſes, and fed men with the huſks of barbarous terms, inſtead of the fruit of real knowledge. CHAP. VIII.

By the ſpreading of the Carteſian ſyſtem, *materia prima*, ſubſtantial forms, and occult qualities with all the jargon of the Ariſtotelian phyſics, fell into utter diſgrace, and were never mentioned by the followers of the new ſyſtem, but as a ſubject of ridicule. Men became ſenſible that their underſtanding had been hoodwinked by thoſe hard terms. They were now accuſtomed to explain the phænomena of Nature, by the figure, ſize, and motion of the particles of matter, things perfectly level to human underſtanding, and could reliſh nothing in philoſophy, that was dark and unintelligible. ARISTOTLE, after a reign of more than a thouſand years, was now expoſed as an object of deriſion even to the vulgar, arrayed in the mock majeſty of his ſubſtantial forms and occult qualities. The ladies became fond of a philoſophy which was eaſily learned, and required no words too harſh for their delicate organs. Queens and Princeſſes, the moſt diſtinguiſhed perſonages of the age, courted the converſation of DES CARTES, and became adepts in his philoſophy. Witneſs CHRISTINA Queen of Sweden, and ELISABETH, daughter of

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of FREDERICK King of Bohemia, the mother of our Royal Family. The laſt, though very young when DES CARTES wrote his *Principia*, he declares to be the only perſon he knew, who perfectly underſtood not only all his philoſophical writings, but the moſt abſtruſe of his mathematical works.

That men ſhould ruſh with violence from one extreme, without going more or leſs into the contrary extreme, is not to be expected from the weakneſs of human nature. DES CARTES and his followers were not exempted from this weakneſs; they thought that extenſion, figure, and motion, were ſufficient to reſolve all the phænomena of the material ſyſtem. To admit other qualities, whoſe cauſe is unknown, was to return to Egypt, from which they had been ſo happily delivered.

When Sir ISAAC NEWTON's doctrine of gravitation was publiſhed, the great objection to it, which hindered its general reception in Europe for half a century, was, that gravitation ſeemed to be an occult quality, as it could not be accounted for by extenſion, figure, and motion, the known attributes of body. They who defended him, found it difficult to anſwer this objection, to the ſatisfaction of thoſe who had been initiated in the principles of the Carteſian ſyſtem. But, by degrees, men came to be ſenſible, that, in revolting from ARISTOTLE, the Carteſians had gone into the oppoſite extreme; experience convinced them, that there are qualities in the material world, whoſe exiſtence is certain, though their cauſe be occult. To acknowledge this, is only a candid confeſſion of human ignorance, than which there is nothing more becoming a Philoſopher.

As

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As all that we can know of the mind muſt be derived from a careful obſervation of its operations in ourſelves; ſo all that we can know of the material ſyſtem muſt be derived from what can be diſcovered by our ſenſes. DES CARTES was not ignorant of this; nor was his ſyſtem ſo unfriendly to obſervation and experiment as the old ſyſtem was. He made many experiments, and called earneſtly upon all lovers of truth to aid him in this way. But, believing that all the phænomena of the material world are the reſult of extenſion, figure, and motion, and that the Deity always combines theſe, ſo as to produce the phænomena in the ſimpleſt manner poſſible, he thought, that, from a few experiments, he might be able to diſcover the ſimpleſt way, in which the obvious phænomena of Nature can be produced, by matter and motion only; and that this muſt be the way in which they are actually produced. His conjectures were ingenious, upon the principles he had adopted: But they are found to be ſo far from the the truth, that they ought for ever to diſcourage Philoſophers from truſting to conjecture in the operations of Nature.

The vortices or whirlpools of ſubtile matter, by which DES CARTES endeavoured to account for the phænomena of the material world, are now found to be fictions, no leſs than the ſenſible ſpecies of ARISTOTLE.

It was reſerved for Sir ISAAC NEWTON to point out clearly the road to the knowledge of Nature's works. Taught by Lord BACON to deſpiſe hypotheſes as the fictions of human fancy, he laid it down as a rule of philoſophiſing, that no cauſes of natural things ought to be

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be assigned but such as can be proved to have a real existence. He saw that all the length men can go in accounting for phænomena is to discover the laws of Nature, according to which they are produced; and therefore, that the true method of philosophising is this: From real facts ascertained by observation and experiment, to collect by just induction the laws of Nature, and to apply the laws so discovered, to account for the phænomena of Nature.

Thus the natural Philosopher has the rules of his art fixed with no less precision than the Mathematician, and may be no less certain when he keeps within them, and when he deviates from them: And though the evidence of a law of nature from induction is not demonstrative, it is the only kind of evidence on which all the most important affairs of human life must rest.

Pursuing this road without deviation, NEWTON discovered the laws of our planetary system, and of the rays of light; and gave the first and noblest examples of that chaste induction, which Lord BACON could only delineate in theory.

How strange is it, that the human mind should have wandered for so many ages, without falling into this tract? How much more strange, that after it has been clearly discovered, and a happy progress made in it, many chuse rather to wander in the fairy regions of hypothesis?

To return to DES CARTES's notions of the manner of our perceiving external objects, from which a concern to do justice to the merit of that great reformer in philosophy has led me to digress, he took it for granted, as the old

old Philoſophers had done, that what we immediately perceive muſt be either in the mind itſelf, or in the brain, to which the mind is immediately preſent. The impreſſions made upon our organs, nerves, and brain, could be nothing according to his philoſophy but various modifications of extenſion, figure, and motion. There could be nothing in the brain like ſound or colour, taſte or ſmell, heat or cold; theſe are ſenſations in the mind, which, by the laws of the union of ſoul and body, are raiſed on occaſion of certain traces in the brain; and although he gives the name of ideas to thoſe traces in the brain, he does not think it neceſſary that they ſhould be perfectly like to the things which they repreſent, any more than that words or ſigns ſhould reſemble the things they ſignify. But, ſays he, that we may follow the received opinion as far as is poſſible, we may allow a ſlight reſemblance. Thus we know, that a print in a book may repreſent houſes, temples, and groves; and ſo far is it from being neceſſary that the print ſhould be perfectly like the thing it repreſents, that its perfection often requires the contrary: For a circle muſt often be repreſented by an ellipſe, a ſquare by a rhombus, and ſo of other things.

The perceptions of ſenſe, he thought, are to be referred ſolely to the union of ſoul and body. They commonly exhibit to us only what may hurt or profit our bodies; and rarely, and by accident only, exhibit things as they are in themſelves. It is by obſerving this, that we muſt learn to throw off the prejudices of ſenſe, and to attend with our intellect to the ideas which are by nature implanted in it. By this means we ſhall underſtand, that the nature of matter

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matter does not consist in those things that affect our senses, such as colour, or smell, or taste: but only in this, that it is something extended in length, breadth, and depth.

The writings of DES CARTES have in general a remarkable degree of perspicuity; and he undoubtedly intended that, in this particular, his philosophy should be a perfect contrast to that of ARISTOTLE; yet, in what he has said in different parts of his writings, of our perception of external objects, there seems to be some obscurity, and even inconsistency; whether owing to his having had different opinions on the subject at different times, or to the difficulty he found in it, I will not pretend to say.

There are two points in particular, wherein I cannot reconcile him to himself: The *first*, regarding the place of the ideas or images of external objects, which are the immediate objects of perception; the *second*, with regard to the veracity of our external senses.

As to the *first*, he sometimes places the ideas of material objects in the brain, not only when they are perceived, but when they are remembered or imagined; and this has always been held to be the Cartesian doctrine; yet he sometimes says, that we are not to conceive the images or traces in the brain to be perceived, as if there were eyes in the brain; these traces are only occasions on which, by the laws of the union of soul and body, ideas are excited in the mind; and therefore it is not necessary, that there should be an exact resemblance between the traces and the things represented by them, any more than that words or signs should be exactly like the things signified by them.

These

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Theſe two opinions, I think, cannot be reconciled. For if the images or traces in the brain are perceived, they muſt be the objects of perception, and not the occaſions of it only. On the other hand, if they are only the occaſions of our perceiving, they are not perceived at all. DES CARTES ſeems to have heſitated between the two opinions, or to have paſſed from the one to the other. Mr. LOCKE ſeems in like manner to have wavered between the two; ſometimes repreſenting the ideas of material things as being in the brain, but more frequently as in the mind itſelf. Neither DES CARTES nor Mr. LOCKE could, conſiſtently with themſelves, attribute any other qualities to images in the brain, but extenſion, figure, and motion; for as to thoſe qualities which Mr. LOCKE diſtinguiſhed by the name of ſecondary qualities, both Philoſophers believed them not to belong to body at all, and therefore could not aſcribe them to images in the brain.

Sir ISAAC NEWTON and Dr. SAMUEL CLARKE, uniformly ſpeak of the ſpecies or images of material things as being in that part of the brain called the *ſenſorium*, and perceived by the mind there preſent; but the former ſpeaks of this point only incidentally, and with his uſual modeſty, in the form of a query. MALEBRANCHE is perfectly clear and unambiguous in this matter. According to his ſyſtem the images or traces in the brain are not perceived at all, they are only occaſions upon which, by the laws of Nature, certain ſenſations are felt by us, and certain of the divine ideas diſcovered to our minds.

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The *second* point on which DES CARTES seems to waver, is with regard to the credit that is due to the teſtimony of our ſenſes.

Sometimes, from the perfection of the Deity, and his being no deceiver, he infers, that our ſenſes and our other faculties cannot be fallacious: And ſince we ſeem clearly to perceive, that the idea of matter comes to us from things external, which it perfectly reſembles; therefore, we muſt conclude, that there really exiſts ſomething extended in length, breadth, and depth, having all the properties which we clearly perceive to belong to an extended thing.

At other times, we find DES CARTES and his followers making frequent complaints, as all the ancient Philoſophers did, of the fallacies of ſenſe. He warns us to throw off its prejudices, and to attend only, with our intellect, to the ideas implanted there. By this means we may perceive, that the nature of matter does not conſiſt in hardneſs, colour, weight, or any of thoſe things that affect our ſenſes, but in this only, that it is ſomething extended in length, breadth, and depth. The ſenſes, he ſays, are only relative to our preſent ſtate; they exhibit things only, as they tend to profit or to hurt us, and rarely, and by accident only, as they are in themſelves.

It was probably owing to an averſion to admit any thing into philoſophy, of which we have not a clear and diſtinct conception, that DES CARTES was led to deny, that there is any ſubſtance of matter diſtinct from thoſe qualities of it which we perceive. We ſay, that matter is ſomething extended, figured, moveable. Extenſion, figure, mobility, therefore, are not matter, but qualities, belonging to this ſomething,

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ſomething, which we call *matter*. DES CARTES could not reliſh this obſcure *ſomething*, which is ſuppoſed to be the ſubject or *ſubſtratum* of thoſe qualities; and therefore maintained, that extenſion is the very eſſence of matter. But as we muſt aſcribe extenſion to ſpace as well as to matter, he found himſelf under a neceſſity of holding, that ſpace and matter are the ſame thing, and differ only in our way of conceiving them; ſo that, wherever there is ſpace there is matter, and no void left in the univerſe. The neceſſary conſequence of this, is, that the material world has no bounds nor limits. He did not, however, chuſe to call it infinite, but indefinite.

It was probably owing to the ſame cauſe that DES CARTES made the eſſence of the ſoul to conſiſt in thought: He would not allow it to be an unknown ſomething that has the power of thinking; it cannot therefore be without thought: And as he conceived that there can be no thought without ideas, the ſoul muſt have had ideas in its firſt formation, which, of conſequence, are innate.

The ſentiments of thoſe who come after DES CARTES, with regard to the nature of body and mind, have been various. Many have maintained, that body is only a collection of qualities to which we give one name; and that the notion of a ſubject of inheſion, to which thoſe qualities belong, is only a fiction of the mind. Some have even maintained, that the ſoul is only a ſucceſſion of related ideas, without any ſubject of inheſion. It appears, by what has been ſaid, how far theſe notions are allied to the Carteſian ſyſtem.

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The triumph of the Carteſian ſyſtem over that of ARISTOTLE, is one of the moſt remarkable revolutions in the hiſtory of philoſophy, and has led me to dwell longer upon it than the preſent ſubject perhaps required. The authority of ARISTOTLE was now no more. That reverence for hard words and dark notions, by which mens underſtanding had been ſtrangled in early years, was turned into contempt, and every thing ſuſpected which was not clearly and diſtinctly underſtood. This is the ſpirit of the Carteſian philoſophy, and is a more important acquiſition to mankind than any of its particular tenets; and for exerting this ſpirit ſo zealouſly, and ſpreading it ſo ſucceſsfully, DES CARTES deſerves immortal honour.

It is to be obſerved, however, that DES CARTES rejected a part only of the ancient theory, concerning the perception of external objects by the ſenſes, and that he adopted the other part. That theory may be divided into two parts: The *firſt*, that images, ſpecies, or forms of external objects, come from the object, and enter by the avenues of the ſenſes to the mind; the *ſecond* part is, That the external object itſelf is not perceived, but only the ſpecies or image of it in the mind. The firſt part DES CARTES and his followers rejected, and refuted by ſolid arguments; but the ſecond part, neither he, nor his followers, have thought of calling in queſtion; being perſuaded, that it is only a repreſentative image, in the mind, of the external object that we perceive, and not the object itſelf. And this image, which the Peripatetics called a ſpecies, he calls an idea, changing the name only, while he admits the thing.

It

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It seems strange, that the great pains which this Philosopher took to throw off the prejudices of education, to dismiss all his former opinions, and to assent to nothing, till he found evidence that compelled his assent, should not have led him to doubt of this opinion of the ancient philosophy. It is evidently a philosophical opinion; for the vulgar undoubtedly believe that it is the external object which we immediately perceive, and not a representative image of it only. It is for this reason, that they look upon it as perfect lunacy to call in question the existence of external objects.

It seems to be admitted as a first principle by the learned and the unlearned, that what is really perceived must exist, and that to perceive what does not exist is impossible. So far the unlearned man and the Philosopher agree. The unlearned man says, I perceive the external object, and I perceive it to exist. Nothing can be more absurd than to doubt of it. The Peripatetic says, what I perceive is the very identical form of the object, which came immediately from the object, and makes an impression upon my mind, as a seal does upon wax; and therefore, I can have no doubt of the existence of an object whose form I perceive. But what says the Cartesian? I perceive not, says he, the external object itself. So far he agrees with the Peripatetic, and differs from the unlearned man. But I perceive an image, or form, or idea, in my own mind, or in my brain. I am certain of the existence of the idea, because I immediately perceive it. But how this idea is formed, or what it represents, is not self-evident; and therefore I must find arguments, by which, from the existence of the

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the idea which I perceive, I can infer the exiſtence of an external object which it repreſents.

As I take this to be a juſt view of the principles of the unlearned man, of the Peripatetic, and of the Carteſian, ſo I think they all reaſon conſequentially from their ſeveral principles; that the Carteſian has ſtrong grounds to doubt of the exiſtence of external objects; the Peripatetic very little ground of doubt; and the unlearned man none at all: And that the difference of their ſituation ariſes from this, that the unlearned man has no hypotheſis; the Peripatetic leans upon an hypotheſis; and the Carteſian upon one half of that hypotheſis.

DES CARTES, according to the ſpirit of his own philoſophy, ought to have doubted of both parts of the Peripatetic hypotheſis, or to have given his reaſons why he adopted one part, as well as why he rejected the other part; eſpecially, ſince the unlearned, who have the faculty of perceiving objects by their ſenſes in no leſs perfection than Philoſophers, and ſhould therefore know, as well as they, what it is they perceive, have been unanimous in this, that the objects they perceive are not ideas in their own minds, but things external. It might have been expected, that a Philoſopher who was ſo cautious as not to take his own exiſtence for granted without proof, would not have taken it for granted, without proof, that every thing he perceived was only ideas in his own mind.

But if DES CARTES made a raſh ſtep in this, as I apprehend he did, he ought not to bear the blame alone. His ſucceſſors have ſtill continued in the ſame track, and, after his example, have adopted one part of the ancient theory,

ory, to wit, that the objects we immediately percieve are ideas only. All their syſtems are built on this foundation. CHAP. IX.

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Of the Sentiments of Mr. LOCKE.

THE reputation which LOCKE's Eſſay on human underſtanding had at home from the beginning, and which it has gradually acquired abroad, is a ſufficient teſtimony of its merit. There is perhaps no book of the metaphyſical kind that has been ſo generally read by thoſe who underſtand the language, or that is more adapted to teach men to think with preciſion, and to inſpire them with that candour and love of truth, which is the genuine ſpirit of philoſophy. He gave, I believe, the firſt example in the Engliſh language of writing on ſuch abſtract ſubjects, with a remarkable degree of ſimplicity and perſpicuity; and in this he has been happily imitated by others that came after him. No author hath more ſucceſsfully pointed out the danger of ambiguous words, and the importance of having diſtinct and determinate notions in judging and reaſoning. His obſervations on the various powers of the human underſtanding, on the uſe and abuſe of words, and on the extent and limits of human knowledge, are drawn from attentive reflection on the operations of his own mind, the true ſource of all real knowledge on theſe ſubjects; and ſhew an uncommon degree of penetration and judgment. But he needs no panegyric of mine, and I mention theſe things, only

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only that, when I have occaſion to differ from him, I may not be thought inſenſible of the merit of an author whom I highly reſpect, and to whom I owe my firſt lights in thoſe ſtudies, as well as my attachment to them.

He ſets out in his Eſſay with a full conviction, common to him with other Philoſophers, that ideas in the mind are the objects of all our thoughts in every operation of the underſtanding. This leads him to uſe the word *idea* ſo very frequently, beyond what was uſual in the Engliſh language, that he thought it neceſſary in his introduction to make this apology: "It "being that term, ſays he, which, I think, "ſerves beſt to ſtand for whatſoever is the ob- "ject of underſtanding, when a man thinks; "I have uſed it to expreſs whatever is meant "by phantaſm, notion, ſpecies, or whatever "it is which the mind can be employed about "in thinking; and I could not avoid frequent- "ly uſing it. I preſume it will be granted "me, that there are ſuch ideas in mens "minds; every man is conſcious of them in "himſelf, and mens words and actions will "ſatisfy him that they are in others."

Speaking of the reality of our knowledge, he ſays, "It is evident the mind knows not "things immediately, but only by the inter- "vention of the ideas it has of them: Our "knowledge therefore is real, only ſo far as "there is a conformity between our ideas and "the reality of things. But what ſhall be here "the criterion? How ſhall the mind, when it "perceives nothing but its own ideas, know "that they agree with things themſelves? This, "though it ſeems not to want difficulty, yet "I think there be two ſorts of ideas that we "may be aſſured agree with things."

We

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We ſee that Mr LOCKE was aware no leſs than DES CARTES, that the doctrine of ideas made it neceſſary, and at the ſame time difficult, to prove the exiſtence of a material world without us; becauſe the mind, according to that doctrine, perceives nothing but a world of ideas in itſelf. Not only DES CARTES, but MALEBRANCHE, ARNAULD, and NORRIS, had perceived this difficulty, and attempted to remove it with little ſucceſs. Mr. LOCKE attepmts the ſame thing; but his arguments are feeble. He even ſeems to be conſcious of this: For he concludes his reaſoning with this obſervation, "That we have evidence ſufficient to "direct us in attaining the good and avoiding "the evil, cauſed by external objects, and "that this is the important concern we have "in being made acquainted with them." This indeed is ſaying no more than will be granted by thoſe who deny the exiſtence of a material world.

As there is no material difference between LOCKE and DES CARTES with regard to the perception of objects by the ſenſes, there is the leſs occaſion, in this place, to take notice of all their differences in other points. They differed about the origin of our ideas. DES CARTES thought ſome of them were innate: The other maintained, that there are no innate ideas, and that they are all derived from two ſources, to wit, *ſenſation* and *reflection;* meaning by ſenſation, the operations of our external ſenſes; and by reflection, that attention which we are capable of giving to the operations of our own minds.

They differed with regard to the eſſence both of matter and of mind: The Britiſh Philoſopher

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pher holding, that the real eſſence of both is beyond the reach of human knowledge; the other conceiving, that the very eſſence of mind conſiſts in thought; and that of matter in extenſion: by which he made matter and ſpace not to differ in reality, and no part of ſpace to be void of matter.

Mr. LOCKE explained, more diſtinctly than had been done before, the operations of the mind in claſſing the various objects of thought, and reducing them to genera and ſpecies. He was the firſt, I think, who diſtinguiſhed in ſubſtances what he calls the nominal eſſence, which is only the notion we form of a genus or ſpecies, and which we expreſs by a definition; from the real eſſence or internal conſtitution of the thing, which makes it to be what it is. Without this diſtinction, the ſubtile diſputes which tortured the ſchoolmen for ſo many ages, in the controverſy between the nominaliſts and realiſts, could never be brought to an iſſue. He ſhews diſtinctly how we form abſtract and general notions, and the uſe and neceſſity of them in reaſoning. And as (according to the received principles of Philoſophers) every notion of our mind muſt have for its object an idea in the mind itſelf; he thinks that we form abſtract ideas by leaving out of the idea of an individual every thing wherein it differs from other individuals of the ſame ſpecies or genus; and that this power of forming abſtract ideas, is that which chiefly diſtinguiſhes us from brute animals, in whom he could ſee no evidence of any abſtract ideas.

Since the time of DES CARTES, Philoſophers have differed much with regard to the ſhare they aſcribe to the mind itſelf, in the fabrication

tion of thoſe repreſentative beings called *ideas*, and the manner in which this work is carried on. CHAP. IX.

Of the authors I have met with, Dr. Robert Hook is the moſt explicit. He was one of the moſt ingenious and active members of the Royal Society of London at its firſt inſtitution; and frequently read lectures to the Society, which were publiſhed among his poſthumous works. In his lectures upon light, Sect. 7. he makes ideas to be material ſubſtances; and thinks that the brain is furniſhed with a proper kind of matter for fabricating the ideas of each ſenſe. The ideas of ſight he thinks are formed of a kind of matter reſembling the Bononian ſtone, or ſome kind of phoſphorus; that the ideas of ſound are formed of ſome matter reſembling the chords or glaſſes which take a ſound from the vibrations of the air; and ſo of the reſt.

The ſoul, he thinks, may fabricate ſome hundreds of thoſe ideas in a day; and that as they are formed, they are puſhed farther off from the centre of the brain where the ſoul reſides. By this means they make a continued chain of ideas, coyled up in the brain, the firſt end of which is fartheſt removed from the centre or ſeat of the ſoul; and the other end is always at the centre, being the laſt idea formed, which is always preſent the moment when conſidered; and therefore, according as there is a greater number of ideas between the preſent ſenſation or thought in the centre and any other, the ſoul is apprehenſive of a larger portion of time interpoſed.

Mr. Locke has not entered into ſo minute a detail of this manufacture of ideas; but he aſcribes

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aſcribes to the mind a very conſiderable hand in forming its own ideas. With regard to our ſenſations, the mind is paſſive, "they being "produced in us, only by different degrees "and modes of motion in our animal ſpirits, "variouſly agitated by external objects:" Theſe, however, ceaſe to be, as ſoon as they ceaſe to be perceived; but, by the faculties of memory and imagination, "the mind has an "ability, when it wills, to revive them again, "and, as it were, to paint them anew upon "itſelf, though ſome with more, ſome with "leſs difficulty.

As to the ideas of reflection, he aſcribes them to no other cauſe but to that attention which the mind is capable of giving to its own operations: Theſe, therefore, are formed by the mind itſelf. He aſcribes likewiſe to the mind the power of compounding its ſimple ideas into complex ones of various forms; of repeating them, and adding the repetitions together; of dividing and claſſing them; of comparing them, and, from that compariſon, of forming the ideas of their relation; nay, of forming a general idea of a ſpecies or genus, by taking from the idea of an individual every thing by which it is diſtinguiſhed from other individuals of the kind, till at laſt it becomes an abſtract general idea, common to all the individuals of the kind.

Theſe, I think, are the powers which Mr. Locke aſcribes to the mind itſelf in the fabrication of its ideas. Biſhop Berkeley, as we ſhall ſee afterwards, abridged them conſiderably, and Mr. Hume much more.

The ideas we have of the various qualities of bodies are not all, as Mr. Locke thinks, of the

the ſame kind. Some of them are images or reſemblances of what is really in the body; others are not. There are certain qualities inſeparable from matter; ſuch as extenſion, ſolidity, figure, mobility. Our ideas of theſe are real reſemblances of the qualities in the body; and theſe he calls primary qualities: But colour, ſound, taſte, ſmell, heat, and cold, he calls ſecondary qualities, and thinks that they are only powers in bodies of producing certain ſenſations in us; which ſenſations have nothing reſembling them, though they are commonly thought to be exact reſemblances of ſomething in the body. "Thus, ſays he, the "idea of heat or light, which we receive, by "our eye or touch, from the ſun, are com-"monly thought real qualities exiſting in the "ſun, and ſomething more than mere powers "in it."

The names of primary and ſecondary qualities, were, I believe, firſt uſed by Mr. LOCKE; but the diſtinction, which they expreſs, was well underſtood by DES CARTES, and is explained by him in his *Principia*, part 1. ſect. 69, 70, 71.

Although no author has more merit than Mr. LOCKE, in pointing out the ambiguity of words, and reſolving, by that means, many knotty queſtions, which had tortured the wits of the ſchoolmen; yet, I apprehend he has been ſometimes miſled by the ambiguity of the word *idea*, which he uſes ſo often almoſt in every page of his eſſay.

In the explication given of this word, we took notice of two meanings given to it; a popular and a philoſophical. In the popular meaning, to have an idea of any thing, ſignifies nothing more than to think of it.

Although

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Although the operations of the mind are moſt properly and naturally, and indeed moſt commonly in all vulgar languages, expreſſed by active verbs, there is another way of expreſſing them leſs common, but equally well underſtood. To think of a thing, and to have a thought of it; to believe a thing, and to have a belief of it; to ſee a thing, and have a ſight of it; to conceive a thing, and to have a conception, notion, or idea of it, are phraſes perfectly ſynonymous. In theſe phraſes, the thought means nothing but the act of thinking; the belief, the act of believing; and the conception, notion, or idea, the act of conceiving. To have a clear and diſtinct idea, is, in this ſenſe, nothing elſe but to conceive the thing clearly and diſtinctly. When the word *idea* is taken in this popular ſenſe, there can be no doubt of our having ideas in our minds. To think without ideas would be to think without thought, which is a manifeſt contradiction.

But there is another meaning of the word *idea* peculiar to Philoſophers, and grounded upon a philoſophical theory, which the vulgar never think of. Philoſophers, ancient and modern, have maintained, that the operations of the mind, like the tools of an artificer, can only be employed upon objects that are preſent, in the mind, or in the brain, where the mind is ſuppoſed to reſide. Therefore, objects that are diſtant, in time or place, muſt have a repreſentative in the mind, or in the brain; ſome image or picture of them, which is the object that the mind contemplates. This repreſentative image was, in the old philoſophy, called a *ſpecies* or *phantaſm*. Since the time of

Des

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Des Cartes, it has more commonly been called an *idea*; and every thought is conceived to have an idea of its object. As this has been a common opinion among Philoſophers, as far back as we can trace philoſophy, it is the leſs to be wondered at, that they ſhould be apt to confound the operation of the mind in thinking, with the idea or object of thought, which is ſuppoſed to be its inſeparable concomitant.

If we pay any regard to the common ſenſe of mankind, thought and the object of thought are different things, and ought to be diſtinguiſhed. It is true, thought cannot be without an object; for every man who thinks muſt think of ſomething; but the object he thinks of is one thing, his thought of that object is another thing. They are diſtinguiſhed in all languages even by the vulgar; and many things may be affirmed of thought, that is, of the operation of the mind in thinking, which cannot without error, and even abſurdity, be affirmed of the object of that operation.

From this, I think it is evident, that if the word *idea*, in a work where it occurs in every paragraph, is uſed without any intimation of the ambiguity of the word, ſometimes to ſignify thought, or the operation of the mind in thinking, ſometimes to ſignify thoſe internal objects of thought which Philoſophers ſuppoſe, this muſt occaſion confuſion in the thoughts both of the author and of the readers. I take this to be the greateſt blemiſh in the Eſſay on human underſtanding. I apprehend this is the true ſource of ſeveral paradoxical opinions in that excellent work, which I ſhall have occaſion to take notice of.

Here

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Here it is very natural to aſk, Whether it was Mr. LOCKE's opinion, that ideas are the only objects of thought? or, Whether it is not poſſible for men to think of things which are not ideas in the mind?

To this queſtion it is not eaſy to give a direct anſwer. On the one hand, he ſays often, in diſtinct and ſtudied expreſſions, that the term *idea* ſtands for whatever is the object of the underſtanding when a man thinks, or whatever it is which the mind can be employed about in thinking: That the mind perceives nothing but its own ideas: That all knowledge conſiſts in the perception of the agreement or diſagreement of our ideas: That we can have no knowledge farther than we have ideas. Theſe, and many other expreſſions of the like import, evidently imply, that every object of thought muſt be an idea, and can be nothing elſe.

On the other hand, I am perſuaded that Mr. LOCKE would have acknowledged, that we may think of ALEXANDER the Great, or of the planet Jupiter, and of numberleſs things, which he would have owned are not ideas in the mind, but objects which exiſt independent of the mind that thinks of them.

How ſhall we reconcile the two parts of this apparent contradiction? All I am able to ſay upon Mr. LOCKE's principles to reconcile them, is this, That we cannot think of ALEXANDER, or of the planet Jupiter, unleſs we have in our minds an idea, that is, an image or picture of thoſe objects. The idea of ALEXANDER is an image, or picture, or repreſentation of that hero in my mind; and this idea is the immediate object of my thought when I think of ALEXANDER. That this was LOCKE's opinion, and

and that it has been generally the opinion of Philoſophers, there can be no doubt. CHAP. IX.

But, inſtead of giving light to the queſtion propoſed, it ſeems to involve it in greater darkneſs.

When I think of ALEXANDER, I am told there is an image or idea of ALEXANDER in my mind, which is the immediate object of this thought. The neceſſary conſequence of this ſeems to be, that there are two objects of this thought; the idea, which is in the mind, and the perſon repreſented by that idea; the firſt, the immediate object of the thought, the laſt, the object of the ſame thought, but not the immediate object. This is a hard ſaying; for it makes every thought of things external to have a double object. Every man is conſcious of his thoughts, and yet, upon attentive reflection, he perceives no ſuch duplicity in the object he thinks about. Sometimes men ſee objects double, but they always know when they do ſo: And I know of no Philoſopher who has expreſsly owned this duplicity in the object of thought, though it follows neceſſarily from maintaining, that, in the ſame thought, there is one object, that is immediate and in the mind itſelf, and another object, which is not immediate, and which is not in the mind.

Beſides this, it ſeems very hard, or rather impoſſible, to underſtand what is meant by an object of thought, that is not an immediate object of thought. A body in motion may move another that was at reſt, by the medium of a third body that is interpoſed. This is eaſily underſtood; but we are unable to conceive any medium interpoſed between a mind

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and the thought of that mind; and, to think of any object by a medium, seems to be words without any meaning. There is a sense in which a thing may be said to be perceived by a medium. Thus any kind of sign may be said to be the medium by which I perceive or understand the thing signified. The sign, by custom, or compact, or perhaps by nature, introduces the thought of the thing signified. But here the thing signified, when it is introduced to the thought, is an object of thought no less immediate than the sign was before: And there are here two objects of thought, one succeeding another, which we have shown is not the case with respect to an idea, and the object it represents.

I apprehend, therefore, that if Philosophers will maintain that ideas in the mind are the only immediate objects of thought, they will be forced to grant that they are the sole objects of thought, and that it is impossible for men to think of any thing else. Yet, surely, Mr. Locke believed that we can think of many things that are not ideas in the mind; but he seems not to have perceived, that the maintaining that ideas in the mind are the only immediate objects of thought, must necessarily draw this consequence along with it.

The consequence, however, was seen by Bishop Berkeley and Mr. Hume, who rather chose to admit the consequence than to give up the principle from which it follows.

Perhaps it was unfortunate for Mr. Locke, that he used the word idea so very frequently, as to make it very difficult to give the attention necessary to put it always to the same meaning. And it appears evident, that, in many places, he

he means nothing more by it but the notion or conception we have of any object of thought; that is, the act of the mind in conceiving it, and not the object conceived. CHAP. IX.

In explaining this word, he says, that he uses it for whatever is meant by phantasm, notion, species. Here are three synonymes to the word *idea*. The first and last are very proper to express the philosophical meaning of the word; being terms of art in the Peripatetic philosophy, and signifying images of external things in the mind, which, according to that philosophy, are objects of thought. But the word *notion* is a word in common language, whose meaning agrees exactly with the popular meaning of the word *idea*, but not with the philosophical.

When these two different meanings of the word *idea* are confounded in a studied explication of it, there is little reason to expect that they should be carefully distinguished in the frequent use of it. There are many passages in the Essay, in which, to make them intelligible, the word *idea* must be taken in one of those senses, and many others, in which it must be taken in the other. It seems probable, that the author, not attending to this ambiguity of the word, used it in the one sense or the other, as the subject-matter required; and the far greater part of his readers have done the same.

There is a third sense, in which he uses the word not unfrequently, to signify objects of thought that are not in the mind, but external. Of this he seems to be sensible, and somewhere makes an apology for it. When he affirms, as he does in innumerable places, that

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all human knowledge conſiſts in the perception of the agreement or diſagreement of our ideas, it is impoſſible to put a meaning upon this, conſiſtent with his principles, unleſs he means by ideas every object of human thought, whether mediate or immediate; every thing, in a word, that can be ſignified by the ſubject, or predicate of a propoſition.

Thus we ſee, that the word *idea* has three different meanings in the Eſſay; and the author ſeems to have uſed it ſometimes in one, ſometimes in another, without being aware of any change in the meaning. The reader ſlides eaſily into the ſame fallacy, that meaning occurring moſt readily to his mind which gives the beſt ſenſe to what he reads. I have met with perſons profeſſing no ſlight acquaintance with the Eſſay on human underſtanding, who maintained, that the word *idea*, wherever it occurs, means nothing more than thought; and that where he ſpeaks of ideas as images in the mind, and as objects of thought, he is not to be underſtood as ſpeaking properly, but figuratively or analogically: And indeed I apprehend, that it would be no ſmall advantage to many paſſages in the book, if they could admit of this interpretation.

It is not the fault of this Philoſopher alone to have given too little attention to the diſtinction between the operations of the mind and the objects of thoſe operations. Although this diſtinction be familiar to the vulgar, and found in the ſtructure of all languages, Philoſophers, when they ſpeak of ideas, often confound the two together; and their theory concerning ideas has led them to do ſo: For ideas being ſuppoſed to be a ſhadowy kind of beings, intermediate

intermediate between the thought, and the object of thought, ſometimes ſeem to coaleſce with the thought, ſometimes with the object of thought, and ſometimes to have a diſtinct exiſtence of their own.

The ſame philoſophical theory of ideas has led Philoſophers to confound the different operations of the underſtanding, and to call them all by the name of perception. Mr. LOCKE, though not free from this fault, is not ſo often chargeable with it, as ſome who came after him. The vulgar give the name of perception to that immediate knowledge of external objects which we have by our external ſenſes. This is its proper meaning in our language, though ſometimes it may be applied to other things metaphorically or analogically. When I think of any thing that does not exiſt, as of the republic of Oceana, I do not perceive it; I only conceive or imagine it: When I think of what happened to me yeſterday, I do not perceive but remember it: When I am pained with the gout, it is not proper to ſay I perceive the pain; I feel it; or am conſcious of it: It is not an object of perception, but of ſenſation and of conſciouſneſs. So far the vulgar diſtinguiſh very properly the different operations of the mind, and never confound the names of things ſo different in their nature: But the theory of ideas leads Philoſophers to conceive all thoſe operations to be of one nature, and to give them one name: They are all, according to that theory, the perception of ideas in the mind. Perceiving, remembering, imagining, being conſcious, are all perceiving ideas in the mind, and are called *perceptions*. Hence it is that Philoſophers ſpeak of

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of the perceptions of memory, and the perceptions of imagination. They make ſenſation to be a perception; and every thing we perceive by our ſenſes to be an idea of ſenſation: Sometimes they ſay, that they are conſcious of the ideas in their own minds, ſometimes that they perceive them.

However improbable it may appear that Philoſophers, who have taken pains to ſtudy the operations of their own minds, ſhould expreſs them leſs properly, and leſs diſtinctly than the vulgar, it ſeems really to be the caſe; and the only account that can be given of this ſtrange phænomenon, I take to be this: That the vulgar ſeek no theory to account for the operations of their minds; they know that they ſee, and hear, and remember, and imagine; and thoſe who think diſtinctly will expreſs theſe operations diſtinctly, as their conſciouſneſs repreſents them to the mind: But Philoſophers think that they ought to know not only that there are ſuch operations, but how they are performed; how they ſee, and hear, and remember, and imagine; and, having invented a theory to explain theſe operations, by ideas or images in the mind, they ſuit their expreſſions to their theory; and as a falſe comment throws a cloud upon the text, ſo a falſe theory darkens the phænomena which it attempts to explain.

We ſhall examine this theory afterwards. Here I would only obſerve, that if it is not true, it may be expected that it ſhould lead ingenious men who adopt it to confound the operations of the mind with their objects, and with one another, even where the common language of the unlearned clearly diſtinguiſhes them.

them. One that truſts to a falſe guide, is in greater danger of being led aſtray than he who truſts his own eyes, though he ſhould be but indifferently acquainted with the road. CHAP. X.

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Of the Sentiments of Biſhop BERKELEY.

GEORGE BERKELEY, afterwards Biſhop of Cloyne, publiſhed his new Theory of Viſion in 1709; his Treatiſe on the Principles of Human Knowledge in 1710; and his Dialogues between Hylas and Philonous in 1713; being then a Fellow of Trinity College, Dublin. He is acknowledged univerſally to have great merit as an excellent writer, and a very acute and clear reaſoner on the moſt abſtract ſubjects, not to ſpeak of his virtues as a man, which were very conſpicuous: Yet the doctrine chiefly held forth in the Treatiſes above mentioned, eſpecially in the two laſt, has generally been thought ſo very abſurd, that few can be brought to think that he either believed it himſelf, or that he ſeriouſly meant to perſuade others of its truth.

He maintains, and thinks he has demonſtrated, by a variety of arguments, grounded on principles of philoſophy univerſally received, that there is no ſuch thing as matter in the univerſe; that ſun and moon, earth and ſea, our own bodies, and thoſe of our friends, are nothing but ideas in the minds of thoſe who think of them, and that they have no exiſtence when they are not the objects of thought; that all that is in the univerſe may be reduced

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to two categories, to wit, minds, and ideas in the mind.

But however abſurd this doctrine might appear to the unlearned, who conſider the exiſtence of the objects of ſenſe as the moſt evident of all truths, and what no man in his ſenſes can doubt; the Philoſophers who had been accuſtomed to conſider ideas as the immediate objects of all thought, had no title to view this doctrine of BERKELEY in ſo unfavourable a light.

They were taught by DES CARTES, and by all that came after him, that the exiſtence of the objects of ſenſe is not ſelf-evident, but requires to be proved by arguments; and although DES CARTES, and many others, had laboured to find arguments for this purpoſe, there did not appear to be that force and clearneſs in them which might have been expected in a matter of ſuch importance. Mr. NORRIS had declared, that after all the arguments that had been offered, the exiſtence of an external world is only probable, but by no means certain. MALEBRANCHE thought it reſted upon the authority of revelation, and that the aguments drawn from reaſon were not perfectly concluſive. Others thought, that the argument from revelation was a mere ſophiſm, becauſe revelation comes to us by our ſenſes, and muſt reſt upon their authority.

Thus we ſee, that the new philoſophy had been making gradual approaches towards BERKELEY's opinion; and, whatever others might do, the Philoſophers had no title to look upon it as abſurd, or unworthy of a fair examination. Several authors attempted to anſwer

anſwer his arguments, but with little ſucceſs, and others acknowledged that they could neither anſwer them nor aſſent to them. It is probable the Biſhop made but few converts to his doctrine; but it is certain he made ſome; and that he himſelf continued, to the end of his life, firmly perſuaded, not only of its truth, but of its great importance for the improvement of human knowledge, and eſpecially for the defence of religion. Dial. Pref. "If the "principles which I here endeavour to propagate are admitted for true, the conſequences which I think evidently flow from "thence are, that atheiſm and ſcepticiſm will "be utterly deſtroyed, many intricate points "made plain, great difficulties ſolved, ſeveral uſeleſs parts of ſcience retrenched, ſpeculation referred to practice, and men reduced from paradoxes to common ſenſe."

In the Theory of viſion, he goes no farther than to aſſert that the objects of ſight are nothing but ideas in the mind, granting, or at leaſt not denying, that there is a tangible world, which is really external, and which exiſts whether we perceive it or not. Whether the reaſon of this was, that his ſyſtem had not, at that time, wholly opened to his own mind, or whether he thought it prudent to let it enter into the minds of his readers by degrees, I cannot ſay. I think he inſinuates the laſt as the reaſon in the Principles of human knowledge.

The Theory of viſion, however, taken by itſelf, and without relation to the main branch of his ſyſtem, contains very important diſcoveries, and marks of great genius. He diſtinguiſhes, more accurately than any that went before

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before him, between the immediate objects of ſight, and thoſe of the other ſenſes which are early aſſociated with them. He ſhews, that diſtance, of itſelf, and immediately, is not ſeen; but that we learn to judge of it by certain ſenſations and perceptions which are connected with it. This is a very important obſervation; and, I believe, was firſt made by this author. It gives much new light to the operations of our ſenſes, and ſerves to account for many phænomena in optics, of which the greateſt adepts in that ſcience had always either given a falſe account, or acknowledged that they could give none at all.

We may obſerve, by the way, that the ingenious author ſeems not to have attended to a diſtinction, by which his general aſſertion ought to have been limited. It is true that the diſtance of an object from the eye is not immediately ſeen; but there is a certain kind of diſtance of one object from another which we ſee immediately. The author acknowledges, that there is a viſible extenſion, and viſible figures, which are proper objects of ſight; there muſt therefore be a viſible diſtance. Aſtronomers call it angular diſtance; and although they meaſure it by the angle, which is made by two lines drawn from the eye to the two diſtant objects, yet it is immediately perceived by ſight, even by thoſe who never thought of that angle.

He led the way in ſhewing how we learn to perceive the diſtance of an object from the eye, though this ſpeculation was carried farther by others who came after him. He made the diſtinction between that extenſion and figure which we perceive by ſight only, and that which

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which we perceive by touch; calling the firſt, viſible, the laſt, tangible extenſion and figure. He ſhewed likewiſe, that tangible extenſion, and not viſible, is the object of geometry, although Mathematicians commonly uſe viſible diagrams in their demonſtrations.

The notion of extenſion and figure which we get from ſight only, and that which we get from touch, have been ſo conſtantly conjoined from our infancy in all the judgments we form of the objects of ſenſe, that it required great abilities to diſtinguiſh them accurately, and to aſſign to each ſenſe what truly belongs to it; "ſo difficult a thing it is," as BERKELEY juſtly obſerves, "to diſſolve an "union ſo early begun, and confirmed by ſo "long a habit." This point he has laboured, through the whole of the Eſſay on viſion, with that uncommon penetration and judgment which he poſſeſſed, and with as great ſucceſs as could be expected in a firſt attempt upon ſo abſtruſe a ſubject.

He concludes this Eſſay, by ſhewing, in no leſs than ſeven ſections, the notions which an intelligent being, endowed with ſight, without the ſenſe of touch, might form of the objects of ſenſe. This ſpeculation, to ſhallow thinkers, may appear to be egregious trifling. To Biſhop BERKELEY it appeared in another light, and will do ſo to thoſe who are capable of entering into it, and who know the importance of it, in ſolving many of the phænomena of viſion. He ſeems, indeed, to have exerted more force of genius in this than in the main branch of his ſyſtem.

In the new philoſophy, the pillars by which the exiſtence of a material world was ſupported,

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ed, were ſo feeble, that it did not require the force of a SAMSON to bring them down; and in this we have not ſo much reaſon to admire the ſtrength of BERKELEY's genius, as his boldneſs in publiſhing to the world an opinion, which the unlearned would be apt to interpret as the ſign of a crazy intellect. A man who was firmly perſuaded of the doctrine univerſally received by Philoſophers concerning ideas, if he could but take courage to call in queſtion the exiſtence of a material world, would eaſily find unanſwerable arguments in that doctrine. "Some truths there are, ſays BERKELEY, ſo near and obvious to the mind, "that a man need only open his eyes to ſee "them. Such, he adds, I take this important one to be, that all the choir of heaven, "and furniture of the earth; in a word, all "thoſe bodies which compoſe the mighty "frame of the world, have not any ſubſiſtence "without a mind." Princ. § 6.

The principle from which this important concluſion is obviouſly deduced, is laid down in the firſt ſentence of his principles of knowledge as evident; and indeed it has always been acknowledged by Philoſophers. "It is "evident, ſays he, to any one who takes a "ſurvey of the objects of human knowledge, "that they are either ideas actually imprinted "on the ſenſes, or elſe ſuch as are perceived, "by attending to the paſſions and operations "of the mind: or, laſtly, ideas formed by "help of memory and imagination, either "compounding, dividing, or barely repreſenting thoſe originally perceived in the foreſaid ways."

This

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This is the foundation on which the whole ſyſtem reſts. If this be true; then, indeed, the exiſtence of a material world muſt be a dream that has impoſed upon all mankind from the beginning of the world.

The foundation on which ſuch a fabric reſts ought to be very ſolid, and well eſtabliſhed; yet BERKELEY ſays nothing more for it than that it is evident. If he means that it is ſelf-evident; this, indeed, might be a good reaſon for not offering any direct argument in proof of it. But I apprehend this cannot juſtly be ſaid. Self-evident propoſitions are thoſe which appear evident to every man of ſound underſtanding who apprehends the meaning of them diſtinctly, and attends to them without prejudice. Can this be ſaid of this propoſition, that all the objects of our knowledge are ideas in our own minds? I believe, that, to any man uninſtructed in philoſophy, this propoſition will appear very improbable, if not abſurd. However ſcanty his knowledge may be, he conſiders the ſun and moon, the earth and ſea, as objects of it: And it will be difficult to perſuade him, that thoſe objects of his knowledge are ideas in his own mind, and have no exiſtence, when he does not think of them. If I may preſume to ſpeak my own ſentiments, I once believed this doctrine of ideas ſo firmly, as to embrace the whole of BERKELEY's ſyſtem in conſequence of it; till, finding other conſequences to follow from it, which gave me more uneaſineſs than the want of a material world, it came into my mind, more than forty years ago, to put the queſtion, What evidence have I for this doctrine, that all the objects of my knowledge are ideas in my own mind?

From

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From that time to the preſent, I have been candidly and impartially, as I think, ſeeking for the evidence of this principle, but can find none, excepting the authority of Philoſophers.

We ſhall have occaſion to examine its evidence afterwards. I would at preſent only obſerve, that all the arguments brought by BERKELEY againſt the exiſtence of a material world are grounded upon it; and that he has not attempted to give any evidence for it, but takes it for granted, as other Philoſophers had done before him.

But ſuppoſing this principle to be true, BERKELEY's ſyſtem is impregnable. No demonſtration can be more evident than his reaſoning from it. Whatever is perceived is an idea, and an idea can only exiſt in a mind. It has no exiſtence when it is not perceived; nor can there be any thing like an idea, but an idea.

So ſenſible he was, that it required no laborious reaſoning to deduce his ſyſtem from the principle laid down, that he was afraid of being thought needleſsly prolix in handling the ſubject, and makes an apology for it. Princ. § 22. "To what purpoſe is it, ſays "he, to dilate, upon that which may be de"monſtrated, with the utmoſt evidence, in "a line or two, to any one who is capable "of the leaſt reflection." But though his demonſtration might have been comprehended in a line or two, he very prudently thought, that an opinion, which the world would be apt to look upon as a monſter of abſurdity, would not be able to make its way at once, even by the force of a naked demonſtration.

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He obſerves juſtly, Dial. 2. " That though " a demonſtration be never ſo well grounded, " and fairly propoſed, yet, if there is, withal, " a ſtrain of prejudice, or a wrong bias on " the underſtanding, can it be expected to " perceive clearly, and adhere firmly to the " truth? No; there is need of time and " pains; the attention muſt be awakened " and detained, by a frequent repetition of " the ſame thing, placed often in the ſame, " often in different lights."

It was therefore neceſſary to dwell upon it, and turn it on all ſides till it became familiar; to conſider all its conſequences, and to obviate every prejudice and prepoſſeſſion that might hinder its admittance. It was even a matter of ſome difficulty to fit it to common language, ſo far as to enable men to ſpeak and reaſon about it intelligibly. Thoſe who have entered ſeriouſly into BERKELEY's ſyſtem, have found, after all the aſſiſtance which his writings give, that time and practice are neceſſary to acquire the habit of ſpeaking and thinking diſtinctly upon it.

BERKELEY foreſaw the oppoſition that would be made to his ſyſtem, from two different quarters; *firſt*, from the Philoſophers; and, *ſecondly*, from the vulgar, who are led by the plain dictates of nature. The firſt he had the courage to oppoſe openly and avowedly; the ſecond he dreaded much more, and therefore takes a great deal of pains, and, I think, uſes ſome art, to court into his party. This is particularly obſervable in his Dialogues. He ſets out with a declaration, Dial. 1. " That, of late, he had quitted ſeveral of " the ſublime notions he had got in the ſchools " of

CHAP. X. "of the Philoſophers for vulgar opinions." and aſſures HYLAS, his fellow-dialogiſt, "That, ſince this revolt from metaphyſical "notions to the plain dictates of nature, and "common ſenſe, he found his underſtanding "ſtrangely enlightened; ſo that he could now "eaſily comprehend a great many things, "which before were all myſtery and riddle." Pref. to Dial. "If his principles are admitted "for true, men will be reduced from para-"doxes to common ſenſe." At the ſame time, he acknowledges, "That they carry "with them a great oppoſition to the prejudi-"ces of Philoſophers, which have ſo far pre-"vailed againſt the common ſenſe and natu-"ral notions of mankind."

When HYLAS objects to him, Dial. 3. "You can never perſuade me PHILONOUS, "that the denying of matter or corporeal ſub-"ſtance is not repugnant to the univerſal "ſenſe of mankind." He anſwers, "I wiſh "both our opinions were fairly ſtated, and "ſubmitted to the judgment of men who had "plain common ſenſe, without the prejudices "of a learned education. Let me be repre-"ſented as one who truſts his ſenſes, who "thinks he knows the things he ſees and feels, "and entertains no doubt of their exiſtence. "—If by material ſubſtance is meant only "ſenſible body, that which is ſeen and felt, "(and the unphiloſophical part of the world, "I dare ſay mean no more), then I am more "certain of matter's exiſtence than you or "any other Philoſopher pretend to be. If "there be any thing which makes the gene-"rality of mankind averſe from the notions "I eſpouſe, it is a miſapprehenſion that I de-

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"ny the reality of sensible things: But as it "is you who are guilty of that, and not I, "it follows, that, in truth, their aversion is "against your notions, and not mine.—I am "content to appeal to the common sense of "the world for the truth of my notion. I am "of a vulgar cast, simple enough to believe "my senses, and to leave things as I find "them.—I cannot, for my life, help thinking "that snow is white, and fire hot."

When HYLAS is at last entirely converted, he observes to PHILONOUS, "After all, the "controversy about matter, in the strict ac-"ceptation of it, lies altogether between you "and the Philosophers, whose principles, I "acknowledge, are not near so natural, or "so agreeable to the common sense of "mankind, and holy scripture, as yours." PHILONOUS observes in the end, "That he "does not pretend to be a setter up of new "notions, his endeavours tend only to unite, "and to place in a clearer light, that truth "which was before shared between the vulgar "and the Philosophers; the former being of "opinion, that those things they immediate-"ly perceive are the real things; and the lat-"ter, that the things immediately perceived "are ideas which exist only in the mind; "which two things put together do, in effect, "constitute the substance of what he advan-"ces:" And he concludes by observing, "That those principles, which at first view "lead to scepticism, pursued to a certain "point, bring men back to common sense."

These passages show sufficiently the author's concern to reconcile his system to the plain dictates of nature and common sense, while he

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expreſſes no concern to reconcile it to the received doctrines of Philoſophers. He is fond to take part with the vulgar againſt the Philoſophers, and to vindicate common ſenſe againſt their innovations. What pity is it that he did not carry this ſuſpicion of the doctrine of Philoſophers ſo far as to doubt of that philoſophical tenet on which his whole ſyſtem is built, to wit, that the things immediately perceived by the ſenſes are ideas which exiſt only in the mind!

After all, it ſeems no eaſy matter to make the vulgar opinion and that of BERKELEY to meet. And to accompliſh this, he ſeems to me to draw each out of its line towards the other, not without ſome ſtraining.

The vulgar opinion he reduces to this, that the very things which we perceive by our ſenſes do really exiſt. This he grants: For theſe things, ſays he, are ideas in our minds, or complexions of ideas, to which we give one name, and conſider as one thing; theſe are the immediate objects of ſenſe, and theſe do really exiſt. As to the notion, that thoſe things have an abſolute external exiſtence, independent of being perceived by any mind, he thinks that this is no notion of the vulgar, but a refinement of Philoſophers; and that the notion of material ſubſtance, as a *ſubſtratum*, or ſupport of that collection of ſenſible qualities to which we give the name of an apple or a melon, is likewiſe an invention of Philoſophers, and is not found with the vulgar till they are inſtructed by Philoſophers. The ſubſtance not being an object of ſenſe, the vulgar never think of it; or, if they are taught the uſe of the word, they mean no more by it but

but that collection of ſenſible qualities which they, from finding them conjoined in nature, have been accuſtomed to call by one name, and to conſider as one thing. CHAP. X.

Thus he draws the vulgar opinion near to his own; and, that he may meet it half way, he acknowledges, that material things have a real exiſtence out of the mind of this or that perſon; but the queſtion, ſays he, between the materialiſt and me, is, Whether they have an abſolute exiſtence diſtinct from their being perceived by God, and exterior to all minds? This indeed, he ſays, ſome Heathens and Philoſophers have affirmed; but whoever entertains notions of the Deity, ſuitable to the holy ſcripture, will be of another opinion.

But here an objection occurs, which it required all his ingenuity to anſwer. It is this: The ideas in my mind cannot be the ſame with the ideas of any other mind; therefore, if the objects I perceive be only ideas, it is impoſſible that the objects I perceive can exiſt any where, when I do not perceive them; and it is impoſſible that two or more minds can perceive the ſame object.

To this BERKELEY anſwers, that this objection preſſes no leſs the opinion of the materialiſt Philoſopher than his: But the difficulty is to make his opinion coincide with the notions of the vulgar, who are firmly perſuaded, that the very identical objects which they perceive, continue to exiſt when they do not perceive them; and who are no leſs firmly perſuaded, that when ten men look at the ſun or the moon, they all ſee the ſame individual object.

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To reconcile this repugnancy, he obſerves, Dial, 3. "That if the term *fame* be taken in "the vulgar acceptation, it is certain, (and not "at all repugnant to the principles he main- "tains,) that different perſons may perceive "the ſame thing; or the ſame thing or idea "exiſt in different minds. Words are of ar- "bitrary impoſition; and ſince men are uſed "to apply the word *fame*, where no diſtinc- "on or variety is perceived, and he does not "pretend to alter their perceptions, it follows, "that as men have ſaid before, *ſeveral ſaw* "*the ſame thing*; ſo they may, upon like oc- "caſions, ſtill continue to uſe the ſame phraſe "without any deviation, either from propriе- "ty of language or the truth of kings: But "if the term *fame* be uſed in the acceptation "of Philoſophers, who pretend to an abſtrac- "ted notion of identity, then, according to "their ſundry definitions of this term, (for "it is not yet agreed wherein that philoſo- "phic identity conſiſts,) it may or may not "be poſſible for divers perſons to perceive the "ſame thing: But whether Philoſophers "ſhall think fit to call a thing the *fame* or "no, is, I conceive, of ſmall importance. "Men may diſpute about identity and diver- "ſity, without any real difference in their "thoughts and opinions, abſtracted from "names."

Upon the whole, I apprehend that BERKELEY has carried this attempt to reconcile his ſyſtem to the vulgar opinion farther than reaſon ſupports him; and he was no doubt tempted to do ſo, from a juſt apprehenſion that, in a controverſy of this kind, the common ſenſe of mankind is the moſt formidable antagoniſt.

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BERKELEY has employed much pains and ingenuity to ſhow that his ſyſtem, if received and believed, would not be attended with thoſe bad conſequences in the conduct of life which ſuperficial thinkers may be apt to impute to it. His ſyſtem does not take away or make any alteration upon our pleaſures or our pains: Our ſenſations, whether agreeable or diſagreeable, are the ſame upon his ſyſtem as upon any other. Theſe are real things, and the only things that intereſt us. They are produced in us according to certain laws of nature, by which our conduct will be directed in attaining the one, and avoiding the other: And it is of no moment to us, whether they are produced immediately by the operation of ſome powerful intelligent being upon our minds; or by the mediation of ſome inanimate being which we call *matter*.

The evidence of an all-governing mind, ſo far from being weakened, ſeems to appear even in a more ſtriking light upon his hypotheſis, than upon the common one. The powers which inanimate matter is ſuppoſed to poſſeſs, have always been the ſtrong hold of Atheiſts, to which they had recourſe in defence of their ſyſtem. This fortreſs of atheiſm muſt be moſt effectually overturned, if there is no ſuch thing as matter in the univerſe. In all this the Biſhop reaſons juſtly and acutely. But there is one uncomfortable conſequence of his ſyſtem, which he ſeems not to have attended to, and from which it will be found difficult, if at all poſſible, to guard it.

The conſequence, I mean, is this, that, although it leaves us ſufficient evidence of a ſupreme intelligent mind, it ſeems to take away

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away all the evidence we have of other intelligent beings like ourſelves. What I call a father, a brother, or a friend, is only a parcel of ideas in my own mind; and being ideas in my mind, they cannot poſſibly have that relation to another mind which they have to mine, any more than the pain felt by me can be the individual pain felt by another. I can find no principle in BERKELEY'S ſyſtem, which affords me even probable ground to conclude, that there are other intelligent beings, like myſelf, in the relations of father, brother, friend, or fellow-citizen. I am left alone, as the only creature of God in the univerſe, in that forlorn ſtate of *egoiſm*, into which it is ſaid ſome of the diſciples of DES CARTES were brought by his philoſophy.

Of all the opinions that have ever been advanced by Philoſophers, this of Biſhop BERKELEY, that there is no material world, ſeems the ſtrangeſt, and the moſt apt to bring philoſophy into ridicule with plain men who are guided by the dictates of nature and common ſenſe. And it will not, I apprehend, be improper to trace this progeny of the doctrine of ideas from its origin, and to obſerve its gradual progreſs, till it acquired ſuch ſtrength, that a pious and learned Biſhop had the boldneſs to uſher it into the world, as demonſtrable from the principles of philoſophy univerſally received, and as an admirable expedient for the advancement of knowledge, and for the defence of religion.

During the reign of the Peripatetic philoſophy, men were little diſpoſed to doubt, and much to dogmatize. The exiſtence of the objects of ſenſe was held as a firſt principle; and the received doctrine was, that the ſenſible ſpecies

cies or idea is the very form of the external object, juſt ſeparated from the matter of it, and ſent into the mind that perceives it; ſo that we find no appearance of ſcepticiſm about the exiſtence of matter under that philoſophy. CHAP. X.

DES CARTES taught men to doubt even of thoſe things that had been taken for firſt principles. He rejected the doctrine of ſpecies or ideas coming from objects; but ſtill maintained, that what we immediately perceive is not the external object, but an idea or image of it in our mind. This led ſome of his diſciples into egoiſm, and to diſbelieve the exiſtence of every creature in the univerſe but themſelves and their own ideas.

But DES CARTES himſelf, either from dread of the cenſure of the Church, which he took great care not to provoke, or to ſhun the ridicule of the world, which might have cruſhed his ſyſtem at once, as it did that of the Egoiſts; or, perhaps, from inward conviction, was reſolved to ſupport the exiſtence of matter. To do this conſiſtently with his principles, he found himſelf obliged to have recourſe to arguments that are far-fetched, and not very cogent. Sometimes he argues, that our ſenſes are given us by God, who is no deceiver; and therefore we ought to believe their teſtimony. But this argument is weak; becauſe, according to his principles, our ſenſes teſtify no more but that we have certain ideas: And if we draw concluſions from this teſtimony, which the premiſes will not ſupport, we deceive ourſelves. To give more force to this weak argument, he ſometimes adds, that we have by nature a ſtrong propenſity to believe that there is an external world correſponding to our ideas.

MALE-

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MALEBRANCHE thought, that this ſtrong propenſity is not a ſufficient reaſon for believing the exiſtence of matter; and that it is to be received as an article of faith, not certainly diſcoverable by reaſon. He is aware that faith comes by hearing; and that it may be ſaid that prophets, apoſtles, and miracles, are only ideas in our minds. But to this he anſwers, That though theſe things are only ideas, yet faith turns them into realities; and this anſwer, he hopes, will ſatisfy thoſe who are not too moroſe.

It may perhaps ſeem ſtrange, that LOCKE, who wrote ſo much about ideas, ſhould not ſee thoſe conſequences which BERKELEY thought ſo obviouſly deducible from that doctrine. Mr. LOCKE ſurely was not willing that the doctrine of ideas ſhould be thought to be loaded with ſuch conſequences. He acknowledges, that the exiſtence of a material world is not to be received as a firſt principle; nor is it demonſtrable; but he offers the beſt arguments for it he can; and ſupplies the weakneſs of his arguments by this obſervation, that we have ſuch evidence, as is ſufficient to direct us in purſuing the good, and avoiding the ill we may receive from external things, beyond which we have no concern.

There is, indeed, a ſingle paſſage in LOCKE's Eſſay, which may lead one to conjecture, that he had a glimpſe of that ſyſtem which BERKELEY afterwards advanced, but thought proper to ſuppreſs it within his own breaſt. The paſſage is in book 4. chap. 10. where, having proved the exiſtence of an eternal intelligent mind, he comes to anſwer thoſe who conceive that matter alſo muſt be eternal; becauſe we cannot conceive how it could be made out of nothing: And

And having observed that the creation of minds requires no less power than the creation of matter, he adds what follows: "Nay possibly, if "we could emancipate ourselves from vulgar "notions, and raise our thoughts, as far as "they would reach, to a closer contemplation "of things, we might be able to aim at some "dim and seeming conception, how matter "might at first be made, and begin to exist "by the power of that eternal first Being; but "to give beginning and being to a spirit, "would be found a more inconceivable effect "of omnipotent power. But this being what "would perhaps lead us too far from the no-"tions on which the philosophy now in the "world is built, it would not be pardonable "to deviate so far from them, or to enquire, "so far as grammar itself would authorise, if "the common settled opinion opposes it; es-"pecially in this place, where the received "doctrine serves well enough to our present "purpose."

It appears from this passage, *first*, That Mr. LOCKE had some system in his mind, perhaps not fully digested, to which we might be led, by raising our thoughts to a closer contemplation of things, and emancipating them from vulgar notions. *Secondly*, That this system would lead so far from the notions on which the philosophy now in the world is built, that he thought proper to keep it within his own breast. *Thirdly*, That it might be doubted whether this system differed so far from the common settled opinion in reality, as it seemed to do in words. *Fourthly*, By this system, we might possibly be enabled to aim at some dim and seeming conception how matter might at first be made and begin

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begin to exiſt; but it would give no aid in conceiving how a ſpirit might be made. Theſe are the characteriſtics of that ſyſtem which Mr. LOCKE had in his mind, and thought it prudent to ſuppreſs. May they not lead to a probable conjecture, that it was the ſame, or ſomething ſimilar to that of Biſhop BERKELEY? According to BERKELEY'S ſyſtem, God's creating the material world at ſuch a time, means no more but that he decreed from that time, to produce ideas in the minds of finite ſpirits, in that order, and according to thoſe rules, which we call the laws of Nature. This, indeed, removes all difficulty, in conceiving how matter was created; and BERKELEY does not fail to take notice of the advantage of his ſyſtem on that account. But his ſyſtem gives no aid in conceiving how a ſpirit may be made. It appears therefore, that every particular Mr. LOCKE has hinted, with regard to that ſyſtem which he had in his mind, but thought it prudent to ſuppreſs, tallies exactly with the ſyſtem of BERKELEY. If we add to this, that BERKELEY'S ſyſtem follows from Mr. LOCKE'S, by very obvious conſequence, it ſeems reaſonable to conjecture, from the paſſage now quoted, that he was not unaware of that conſequence, but left it to thoſe who ſhould come after him to carry his principles their full length, when they ſhould by time be better eſtabliſhed, and able to bear the ſhock of their oppoſition to vulgar notions. Mr. NORRIS, in his Eſſay towards the theory of the ideal or intelligible world, publiſhed in 1701, obſerves, that the material world is not an object of ſenſe; becauſe ſenſation is within us, and has no object. Its exiſtence, therefore, he ſays, is a collection of reaſon, and not a very evident one.

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From this detail we may learn, that the doctrine of ideas, as it was new modelled by DES CARTES, looked with an unfriendly aſpect upon the material world; and although Philoſophers were very unwilling to give up either, they found it a very difficult taſk to reconcile them to each other. In this ſtate of things BERKELEY, I think, is reputed the firſt who had the daring reſolution to give up the material world altogether, as a ſacrifice to the received philoſophy of ideas.

But we ought not in this hiſtorical ſketch to omit an author of far inferior name, ARTHUR COLLIER, Rector of Langford Magna, near Sarum. He publiſhed a book in 1713, which he calls *Clavis Univerſalis*; or, a new Enquiry after Truth: being a demonſtration of the non-exiſtence or impoſſibility of an external world. His arguments are the ſame in ſubſtance with BERKELEY's; and he appears to underſtand the whole ſtrength of his cauſe: Though he is not deficient in metaphyſical acuteneſs, his ſtile is diſagreeable, being full of conceits, of new coined words, ſcholaſtic terms, and perplexed ſentences. He appears to be well acquainted with DES CARTES, MALEBRANCHE, and NORRIS, as well as with ARISTOTLE and the ſchoolmen: But what is very ſtrange, it does not appear that he had ever heard of LOCKE's Eſſay, which had been publiſhed twenty-four years, or of BERKELEY's Principles of Knowledge, which had been publiſhed three years.

He ſays, he had been ten years firmly convinced of the non-exiſtence of an external world, before he ventured to publiſh his book. He is far from thinking as BERKELEY does, that the vulgar are of his opinion. If his book ſhould

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ſhould make any converts to his ſyſtem, (of which he expreſſes little hope, though he has ſupported it by nine demonſtrations,) he takes pains to ſhow that his diſciples, notwithſtanding their opinion, may, with the unenlightened, ſpeak of material things in the common ſtile. He himſelf had ſcruples of conſcience about this for ſome time; and if he had not got over them, he muſt have ſhut his lips for ever: But he conſidered, that God himſelf has uſed this ſtile in ſpeaking to men in the holy ſcripture, and has thereby ſanctifyed it to all the faithful; and that to the pure all things are pure. He thinks his opinion may be of great uſe, eſpecially in religion; and applies it in particular, to put an end to the controverſy about Chriſt's preſence in the ſacrament.

I have taken the liberty to give this ſhort account of COLLIER's book, becauſe I believe it is rare, and little known. I have only ſeen one copy of it, which is in the Univerſity library of Glaſgow.

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Biſhop BERKELEY's *Sentiments of the Nature of Ideas.*

I PASS over the ſentiments of Biſhop BERKELEY, with reſpect to abſtract ideas, and with reſpect to ſpace and time, as things which may more properly be conſidered in another place. But I muſt take notice of one part of his ſyſtem, wherein he ſeems to have deviated from the common opinion about ideas.

Though he ſets out in his principles of knowledge by telling us, that it is evident the objects of human knowledge are ideas, and builds his whole ſyſtem upon this principle: yet, in the progreſs of it, he finds that there are certain objects of human knowledge that are not ideas, but things which have a permanent exiſtence. The objects of knowledge, of which we have no ideas, are our own minds, and their various operations, other finite minds, and the Supreme Mind. The reaſon why there can be no ideas of ſpirits and their operations, the author informs us is this, That ideas are paſſive, inert, unthinking beings; they cannot therefore be the image or likeneſs of things that have thought, and will, and active power; we have notions of minds, and of their operations, but not ideas: We know what we mean by thinking, willing, and perceiving; we can reaſon about beings endowed with thoſe powers, but we have no ideas of them. A ſpirit or mind is the only ſubſtance or ſupport wherein the unthinking beings or ideas can exiſt; but that

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that this ſubſtance which ſupports or perceives ideas, ſhould itſelf be an idea, or like an idea, is evidently abſurd.

He obſerves farther, Princip. ſect. 142. that "all relations, including an act of the "mind, we cannot properly be ſaid to have "an idea, but rather a notion of the relations "or habitudes between things." But if, in "the modern way, the word idea is extended "to ſpirits, and relations, and acts, this is, "after all, an affair of verbal concern; yet it "conduces to clearneſs and propriety, that "we diſtinguiſh things very different by diff-"erent names."

This is an important part of BERKELEY'S ſyſtem, and deſerves attention. We are led by it to divide the objects of human knowledge into two kinds: The firſt is ideas, which we have by our five ſenſes; they have no exiſtence when they are not perceived, and exiſt only in the minds of thoſe who perceive them. The ſecond kind of objects comprehends ſpirits, their acts, and the relations and habitudes of things. Of theſe we have notions, but no ideas. No idea can repreſent them, or have any ſimilitude to them: Yet we underſtand what they mean, and we can ſpeak with underſtanding, and reaſon about them without ideas.

This account of ideas is very different from that which LOCKE has given. In his ſyſtem, we have no knowledge where we have no ideas. Every thought muſt have an idea for its immediate object. In BERKELEY'S, the moſt important objects are known without ideas. In LOCKE'S ſyſtem, there are two ſources of our ideas, ſenſation and reflection. In BERKELEY'S,

BERKELEY's, ſenſation is the only ſource, because of the objects of reflection there can be no ideas. We know them without ideas. LOCKE divides our ideas into thoſe of ſubſtances, modes, and relations. In BERKELEY's ſyſtem, there are no ideas of ſubſtances, or of relations; but notions only. And even in the claſs of modes, the operations of our own minds are things of which we have diſtinct notions; but no ideas. CHAP. XI.

We ought to do the juſtice to MALEBRANCHE to acknowledge, that in this point, as well as in many others, his ſyſtem comes nearer to BERKELEY's than the latter ſeems willing to own. That author tells us, that there are four different ways in which we come to the knowledge of things. To know things by their ideas, is only one of the four. He affirms, that we have no idea of our own mind, or any of its modifications: That we know theſe things by conſcioufneſs, without ideas. Whether theſe two acute Philoſophers foreſaw the conſequences that may be drawn from the ſyſtem of ideas, taken in its full extent, and which were afterwards drawn by Mr. HUME, I cannot pretend to ſay. If they did, their regard to religion was too great to permit them to admit thoſe conſequences, or the principles with which they were neceſſarily connected.

However this may be, if there be ſo many things that may be apprehended and known without ideas, this very naturally ſuggeſts a ſcruple with regard to thoſe that are left: For it may be ſaid, If we can apprehend and reaſon about the world of ſpirits, without ideas, Is it not poſſible that we may apprehend and reaſon about a material world, without ideas? If conſcioufneſs

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ſciouſneſs and reflection furniſh us with notions of ſpirits, and of their attributes, without ideas, May not our ſenſes furniſh us with notions of bodies and their attributes, without ideas?

BERKELEY foreſaw this objection to his ſyſtem, and puts it in the mouth of HYLAS, in the following words: Dial. 3. HYLAS: "If you can conceive the mind of God, without having an idea of it, Why may not I be allowed to conceive the exiſtence of matter, notwithſtanding that I have no idea of it?" The anſwer of PHILONOUS is, "You neither perceive matter objectively, as you do an inactive being or idea, nor know it, as you do yourſelf, by a reflex act, neither do you immediately apprehend it by ſimilitude of the one or the other, nor yet collect it by reaſoning from that which you know immediately. All which makes the caſe of matter widely different from that of the Deity."

Though HYLAS declares himſelf ſatisfied with this anſwer, I confeſs I am not: Becauſe, if I may truſt the faculties that God has given me, I do perceive matter objectively, that is, ſomething which is extended and ſolid, which may be meaſured and weighed, is the immediate object of my touch and ſight. And this object I take to be matter, and not an idea. And though I have been taught by Philoſophers, that what I immediately touch is an idea, and not matter; yet I have never been able to diſcover this by the moſt accurate attention to my own perceptions.

It were to be wiſhed, that this ingenious author had explained what he means by ideas,

as diſtinguiſhed from notions. The word no- CHAP. XI.
tion, being a word in common language, is well underſtood. All men mean by it, the conception, the apprehenſion, or thought which we have of any object of thought. A notion, therefore, is an act of the mind conceiving or thinking of ſome object. The object of thought may be either ſomething that is in the mind, or ſomething that is not in the mind. It may be ſomething that has no exiſtence, or ſomething that did, or does, or ſhall exiſt. But the notion which I have of that object, is an act of my mind, which really exiſts while I think of the object; but has no exiſtence when I do not think of it. The word idea, in popular language, has preciſely the ſame meaning as the word notion. But Philoſophers have another meaning to the word idea; and what that meaning is, I think, is very difficult to ſay.

The whole of Biſhop BERKELEY's ſyſtem depends upon the diſtinction between notions and ideas; and therefore it is worth while to find, if we are able, what thoſe things are which he calls ideas, as diſtinguiſhed from notions.

For this purpoſe, we may obſerve, that he takes notice of two kinds of ideas, the ideas of ſenſe, and the ideas of imagination. "The "ideas imprinted on the ſenſes by the Author "of Nature, he ſays, are called real things; "and thoſe excited in the imagination, being "leſs regular, vivid and conſtant, are more "properly termed ideas, or images of things, "which they copy and repreſent. But then "our ſenſations, be they never ſo vivid and

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" diſtinct, are nevertheleſs ideas; that is, " they exiſt in the mind, or are perceived by " it as truly as the ideas of its own framing. " The ideas of ſenſe are allowed to have more " reality in them; that is, to be more ſtrong, " orderly, and coherent, than the creatures of " the mind. They are alſo leſs dependent on " the ſpirit, or thinking ſubſtance which per- " ceives them, in that they are excited by the " will of another and more powerful ſpirit; " yet ſtill they are ideas; and certainly no " idea, whether faint or ſtrong, can exiſt, " otherwiſe than in a mind perceiving it." Princip. ſect. 33.

From this paſſage we ſee, that, by the ideas of ſenſe, the author means ſenſations: And this indeed is evident from many other paſſages, of which I ſhall mention a few, Princip. ſect. 5. " Light and colours, heat and cold, " extenſion and figure, in a word, the things " we ſee and feel, what are they but ſo many " ſenſations, notions, ideas, or impreſſions on " the ſenſe; and is it poſſible to ſeparate, even " in thought, any of theſe from perception? For " my part, I might as eaſily divide a thing " from itſelf." Sect. 18. " As for our ſen- " ſes, by them we have the knowledge of our " ſenſations, ideas, or thoſe things that are " immediately perceived by ſenſe; call them " what you will. But they do not inform us " that things exiſt without the mind, or un- " perceived, like to thoſe which are perceiv- " ed." Sect. 25. " All our ideas, ſenſations, " or the things which we perceive, by whate- " ver names they may be diſtinguiſhed, are " viſibly

" viſibly inactive; there is nothing of power CHAP.
" or agency included in them." XI.

This therefore appears certain, that, by the ideas of ſenſe, the author meant the ſenſations we have by means of our ſenſes. I have endeavoured to explain the meaning of the word *ſenſation*, Eſſay 1. chap. 1. and refer to the explication there given of it, which appears to me to be perfectly agreeable to the ſenſe in which Biſhop BERKELEY uſes it.

As there can be no notion or thought but in a thinking being; ſo there can be no ſenſation but in a ſentient being. It is the act, or feeling of a ſentient being; its very eſſence conſiſts in its being felt. Nothing can reſemble a ſenſation, but a ſimilar ſenſation in the ſame, or in ſome other mind. To think that any quality in a thing that is inanimate can reſemble a ſenſation, is a great abſurdity. In all this, I cannot but agree perfectly with Biſhop BERKELEY; and I think his notions of ſenſations much more diſtinct and accurate than LOCKE's, who thought that the primary qualities of body are reſemblances of our ſenſations, but that the ſecondary are not.

That we have many ſenſations by means of our external ſenſes, there can be no doubt; and if he is pleaſed to call thoſe, ideas, there ought to be no diſpute about the meaning of a word. But ſays Biſhop BERKELEY, by our ſenſes, we have the knowledge *only* of our ſenſations or ideas, call them which you will. I allow him to call them which he will; but I would have the word *only* in this ſentence to be well weighed, becauſe a great deal depends upon it.

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For if it be true, that, by our ſenſes, we have the knowledge of our ſenſations only, then his ſyſtem muſt be admitted, and the exiſtence of a material world muſt be given up as a dream. No demonſtration can be more invincible than this. If we have any knowledge of a material world, it muſt be by the ſenſes: But, by the ſenſes, we have no knowledge but of our ſenſations only; and our ſenſations have no reſemblance of any thing that can be in a material world. The only propoſition in this demonſtration which admits of doubt is, that, by our ſenſes, we have the knowledge of our ſenſations only, and of nothing elſe. If there are objects of the ſenſes which are not ſenſations, his arguments do not touch them; they may be things which do not exiſt in the mind, as all ſenſations do; they may be things, of which, by our ſenſes, we have notions, though no ideas; juſt as, by conſciouſneſs and reflection, we have notions of ſpirits, and of their operations, without ideas or ſenſations.

Shall we ſay then, that, by our ſenſes, we have the knowledge of our ſenſations only; and that they give us no notion of any thing but of our ſenſations? Perhaps this has been the doctrine of Philoſophers, and not of Biſhop BERKELEY alone, otherwiſe he would have ſupported it by arguments. Mr. LOCKE calls all the notions we have by our ſenſes ideas of ſenſation; and in this has been very generally followed. Hence it ſeems a very natural inference, that ideas of ſenſation are ſenſations. But Philoſophers may err: Let us hear the dictates of common ſenſe upon this point.

Suppoſe

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Suppoſe I am pricked with a pin, I aſk, Is the pain I feel, a ſenſation? undoubtedly it is. There can be nothing that reſembles pain in any inanimate being. But I aſk again, Is the pin a ſenſation? To this queſtion I find myſelf under a neceſſity of anſwering, That the pin is not a ſenſation, nor can have the leaſt reſemblance to any ſenſation. The pin has length and thickneſs, and figure and weight. A ſenſation can have none of thoſe qualities. I am not more certain that the pain I feel is a ſenſation, than that the pin is not a ſenſation; yet the pin is an object of ſenſe; and I am as certain that I perceive its figure and hardneſs by my ſenſes, as that I feel pain when pricked by it.

Having ſaid ſo much of the ideas of ſenſe in BERKELEY'S ſyſtem, we are next to conſider the account he gives of the ideas of imagination. Of theſe he ſays, Princip. ſect. 28. "I find I can excite ideas in my mind at "pleaſure, and vary and ſhift the ſcene as oft "as I think fit. It is no more than willing; "and ſtraightway this or that idea ariſes in my "fancy; and by the ſame power it is obliterated, and makes way for another. This "making and unmaking of ideas, doth very "properly denominate the mind active. This "much is certain, and grounded on experience. Our ſenſations, he ſays, are called "real things; the ideas of imagination are "more properly termed ideas, or images of "things;" that is, as I apprehend, they are the images of our ſenſations. It might ſurely be expected, that we ſhould be well acquainted with the ideas of imagination, as they are of

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of our making; yet, after all the Biſhop has ſaid about them, I am at a loſs to know what they are.

I would obſerve, in the *firſt* place, with regard to theſe ideas of imagination, that they are not ſenſations; for ſurely ſenſation is the work of the ſenſes, and not of imagination; and though pain be a ſenſation, the thought of pain, when I am not pained, is no ſenſation.

I obſerve, in the *ſecond* place, that I can find no diſtinction between ideas of imagination and notions, which the author ſays are not ideas. I can eaſily diſtinguiſh between a notion and a ſenſation. It is one thing to ſay I have the ſenſation of pain. It is another thing to ſay I have a notion of pain. The laſt expreſſion ſignifies no more than that I underſtand what is meant by the word *pain*. The firſt ſignifies that I really feel pain. But I can find no diſtinction between the notion of pain, and the imagination of it, or indeed between the notion of any thing elſe, and the imagination of it. I can therefore give no account of the diſtinction which BERKELEY makes between ideas of imagination and notions, which he ſays are not ideas. They ſeem to me perfectly to coincide.

He ſeems indeed to ſay, that the ideas of imagination differ not in kind from thoſe of the ſenſes, but only in the degree of their regularity, vivacity, and conſtancy. "They are, "ſays he, leſs regular, vivid, and conſtant." This doctrine was afterwards greedily embraced by Mr. HUME, and makes a main pillar of his ſyſtem; but it cannot be reconciled to common ſenſe, to which Biſhop BERKELEY profeſſes a great regard. For, according to this

this doctrine, if we compare the ſtate of a man racked with the gout, with his ſtate, when being at perfect eaſe, he relates what he has ſuffered; the difference of theſe two ſtates is only this, that, in the laſt, the pain is leſs regular, vivid, and conſtant, than in the firſt. We cannot poſſibly aſſent to this. Every man knows that he can relate the pain he ſuffered, not only without pain, but with pleaſure; and that to ſuffer pain, and to think of it, are things which totally differ in kind, and not in degree only. CHAP. XI.

We ſee, therefore, upon the whole, that according to this ſyſtem, of the moſt important objects of knowledge, that is, of ſpirits, of their operations, and of the relations of things, we have no ideas at all; we have notions of them, but not ideas: The ideas we have are thoſe of ſenſe, and thoſe of imagination. The firſt are the ſenſations we have by means of our ſenſes, whoſe exiſtence no man can deny, becauſe he is conſcious of them; and whoſe nature hath been explained by this author with great accuracy. As to the ideas of imagination, he hath left us much in the dark: He makes them images of our ſenſations, though, according to his own doctrine, nothing can reſemble a ſenſation but a ſenſation. He ſeems to think, that they differ from ſenſations only in the degree of their regularity, vivacity, and conſtancy: But this cannot be reconciled to the experience of mankind; and beſides this mark, which cannot be admitted, he hath given us no other mark by which they may be diſtinguiſhed from notions: Nay, it may be obſerved, that the very reaſon he gives why we can have no ideas of the acts of

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of the mind about its ideas, nor of the relations of things, is applicable to what he calls ideas of imagination. Princip. ſect. 142. "We may not, I think, ſtrictly be ſaid to "have an idea of an active being, or of an "action, although we may be ſaid to have "a notion of them. I have ſome knowledge "or notion of my mind, and its acts about "ideas, in as much as I know or underſtand "what is meant by theſe words. It is alſo "to be remarked, that all relations including "an act of the mind, we cannot ſo properly "be ſaid to have an idea, but rather a notion "of the relations and habitudes between "things." From this it follows, that our imaginations are not properly ideas but notions, becauſe they include an act of the mind. For he tells us, in a paſſage already quoted, that they are creatures of the mind, of its own framing, and that it makes and unmakes them as it thinks fit, and from this is properly denominated active. If it be a good reaſon why we have not ideas, but notions only of relations, becauſe they include an act of the mind; the ſame reaſon muſt lead us to conclude, that our imaginations are notions and not ideas, ſince they are made and unmade by the mind as it thinks fit, and from this it is properly denominated active.

When ſo much has been written, and ſo many diſputes raiſed, about ideas, it were deſirable that we knew what they are, and to what category or claſs of beings they belong. In this we might expect ſatisfaction in the writings of Biſhop BERKELEY, if any where, conſidering his known accuracy and preciſion in the uſe of words; and it is for this reaſon that

that I have taken ſo much pains to find out what he took them to be. CHAP. XI.

After all, if I underſtand what he calls the ideas of ſenſe, they are the ſenſations which we have by means of our five ſenſes; but they are, he ſays, leſs properly termed ideas.

I underſtand likewiſe what he calls notions, but they, ſays he, are very different from ideas, though, in the modern way, often called by that name.

The ideas of imagination remain, which are moſt properly termed ideas, as he ſays; and, with regard to theſe, I am ſtill very much in the dark. When I imagine a lion or an elephant, the lion or elephant is the object imagined. The act of the mind, in conceiving that object, is the notion, the conception, or imagination of the object. If beſides the object, and the act of the mind about it, there be ſomething called the idea of the object, I know not what it is.

If we conſult other authors who have treated of ideas, we ſhall find as little ſatisfaction with regard to the meaning of this philoſophical term. The vulgar have adopted it; but they only mean by it the notion or conception we have of any object, eſpecially our more abſtract or general notions. When it is thus put to ſignify the operation of the mind about objects, whether in conceiving, remembering, or perceiving, it is well underſtood. But Philoſophers will have ideas to be the objects of the mind's operations, and not the operations themſelves. There is, indeed, great variety of objects of thought. We can think of minds, and of their operations, of bodies, and of their qualities and relations. If ideas are not comprehended

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prehended under any of these classes, I am at a loss to comprehend what they are.

In ancient philosophy, ideas were said to be immaterial forms, which, according to one system, existed from all eternity, and, according to another, are sent forth from the objects, whose form they are. In modern philosophy, they are things in the mind, which are the immediate objects of all our thoughts, and which have no existence when we do not think of them. They are called the images, the resemblances, the representatives of external objects of sense; yet they have neither colour, nor smell, nor figure, nor motion, nor any sensible quality. I revere the authority of Philosophers, especially where they are so unanimous; but until I can comprehend what they mean by ideas, I must think and speak with the vulgar.

In sensation, properly so called, I can distinguish two things, the mind or sentient being, and the sensation. Whether the last is to be called a feeling or an operation, I dispute not; but it has no object distinct from the sensation itself. If in sensation there be a third thing, called an idea, I know not what it is.

In perception, in remembrance, and in conception, or imagination, I distinguish three things, the mind that operates, the operation of the mind, and the object of that operation. That the object perceived is one thing, and the perception of that object another, I am as certain as I can be of any thing. The same may be said of conception, of remembrance, of love and hatred, of desire and aversion. In all these, the act of the mind about its object is one thing, the object is another thing.

There

There muſt be an object, real or imaginary, diſtinct from the operations of the mind about it. Now, if in theſe operations the idea be a fourth thing different from the three I have mentioned, I know not what it is, nor have been able to learn from all that has been written about ideas. And if the doctrine of Philoſophers about ideas confounds any two of theſe things which I have mentioned as diſtinct; if, for example, it confounds the object perceived with the perception of that object, and repreſents them as one and the ſame thing, ſuch doctrine is altogether repugnant to all that I am able to diſcover of the operations of my own mind; and it is repugnant to the common ſenſe of mankind, expreſſed in the ſtructure of all languages.

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Of the Sentiments of Mr. HUME.

TWO volumes of the Treatiſe of human nature were publiſhed in 1739, and the third in 1740. The doctrine contained in this Treatiſe was publiſhed anew in a more popular form in Mr. HUME's philoſophical Eſſays, of which there have been various Editions. What other authors, from the time of DES CARTES, had called *ideas*, this author diſtinguiſhes into two kinds, to wit, *impreſſions* and *ideas*; comprehending under the firſt, all our ſenſations, paſſions, and emotions; and under the laſt, the faint images of theſe, when we remember or imagine them.

He ſets out with this, as a principle that needed no proof, and of which therefore he offers none, That all the perceptions of the human mind reſolve themſelves into theſe two kinds, *impreſſions* and *ideas*.

As this propoſition is the foundation upon which the whole of Mr. HUME's ſyſtem reſts, and from which it is raiſed with great acuteneſs indeed, and ingenuity, it were to be wiſhed that he had told us upon what authority this fundamental propoſition reſts. But we are left to gueſs, whether it is held forth as a firſt principle, which has its evidence in itſelf; or whether it is to be received upon the authority of Philoſophers.

Mr. LOCKE had taught us, that all the immediate objects of human knowledge are ideas in the mind. Biſhop BERKELEY, proceeding upon

upon this foundation, demonſtrated very eaſily that there is no material world. And he thought, that, for the purpoſes both of philoſophy and religion, we ſhould find no loſs, but great benefit in the want of it. But the Biſhop, as became his order, was unwilling to give up the world of ſpirits. He ſaw very well, that ideas are as unfit to repreſent ſpirits as they are to repreſent bodies. Perhaps he ſaw, that if we perceive only the ideas of ſpirits, we ſhall find the ſame difficulty in inferring their real exiſtence from the exiſtence of their ideas, as we find in inferring the exiſtence of matter from the idea of it; and therefore, while he gives up the material world in favour of the ſyſtem of ideas, he gives up one half of that ſyſtem in favour of the world of ſpirits; and maintains, that we can, without ideas, think, and ſpeak, and reaſon, intelligibly about ſpirits, and what belongs to them. CHAP. XII.

Mr. HUME ſhows no ſuch partiality in favour of the world of ſpirits. He adopts the theory of ideas in its full extent; and, in conſequence, ſhews that there is neither matter nor mind in the univerſe; nothing but impreſſions and ideas. What we call a *body*, is only a bundle of ſenſations; and what we call the *mind*, is only a bundle of thoughts, paſſions, and emotions, without any ſubject.

Some ages hence, it will perhaps be looked upon as a curious anecdote, that two Philoſophers of the 18th century, of very diſtinguiſhed rank, were led by a philoſophical hypotheſis; one, to diſbelieve the exiſtence of matter; and the other, to diſbelieve the exiſtence both of matter and of mind. Such an anecdote may not be uninſtructive, if it prove a warning

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ing to Philoſophers to beware of hypotheſes, eſpecially when they lead to concluſions which contradict the principles, upon which all men of common ſenſe muſt act in common life.

The Egoiſts, whom we mentioned before, were left far behind by Mr. HUME; for they believed their own exiſtence, and perhaps alſo the exiſtence of a Deity. But Mr. HUME's ſyſtem does not even leave him a *ſelf* to claim the property of his impreſſions and ideas.

A ſyſtem of conſequences, however abſurd, acutely and juſtly drawn from a few principles, in very abſtract matters, is of real utility in ſcience, and may be made ſubſervient to real knowledge. This merit Mr. HUME's metaphyſical writings have in a great degree.

We had occaſion before to obſerve, that, ſince the time of DES CARTES, Philoſophers, in treating of the powers of the mind, have in many inſtances confounded things, which the common ſenſe of mankind has always led them to diſtinguiſh, and which have different names in all languages. Thus, in the perception of an external object, all languages diſtinguiſh three things, the *mind* that perceives, the operation of that mind, which is called *perception*, and the *object* perceived. Nothing appears more evident to a mind untutored by philoſophy, than that theſe three are diſtinct things, which, though related, ought never to be confounded. The ſtructure of all languages ſuppoſes this diſtinction, and is built upon it. Philoſophers have introduced a fourth thing in this proceſs, which they call the *idea* of the object, which is ſuppoſed to be an image, or repreſentative of the object, and is ſaid to be the immediate object. The vulgar

gar know nothing about this idea; it is a creature of philoſophy, introduced to account for, and explain the manner of our perceiving external objects.

It is pleaſant to obſerve, that while Philoſophers, for more than a century, have been labouring, by means of ideas, to explain perception, and the other operations of the mind, thoſe ideas have by degrees uſurped the place of perception, object, and even of the mind itſelf, and have ſupplanted thoſe very things they were brought to explain. DES CARTES reduced all the operations of the underſtanding to perception; and what can be more natural to thoſe who believe that they are only different modes of perceiving ideas in our own minds. LOCKE confounds ideas ſometimes with the perception of an external object, ſometimes with the external object itſelf. In BERKELEY's ſyſtem the idea is the only object, and yet is often confounded with the perception of it. But in HUME's, the idea or the impreſſion, which is only a more lively idea, is mind, perception, and object, all in one: So that, by the term perception in Mr. HUME's ſyſtem, we muſt underſtand the mind itſelf, all its operations, both of underſtanding and will, and all the objects of theſe operations. Perception taken in this ſenſe he divides into our more lively perceptions, which he calls *impreſſions*, and the leſs lively, which he calls *ideas*. To prevent repetition, I muſt here refer the reader to ſome remarks made upon this diviſion, Eſſay 1. chap. 1. in the explication there given of the words *perceive*, *object*, *impreſſion*.

Philoſophers

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Philoſophers have differed very much with regard to the origin of our ideas, or the ſources whence they are derived. The Peripatetics held, that all knowledge is derived originally from the ſenſes; and this ancient doctrine ſeems to be revived by ſome late French Philoſophers, and by Dr. HARTLEY and Dr. PRIESTLY among the Britiſh. DES CARTES maintained, that many of our ideas are innate. LOCKE oppoſed the doctrine of innate ideas with much zeal, and employs the whole firſt book of his Eſſay againſt it. But he admits two different ſources of ideas; the operations of our external ſenſes, which he calls *ſenſation*, by which we get all our ideas of body, and its attributes; and *reflection* upon the operations of our minds, by which we get the ideas of every thing belonging to the mind. The main deſign of the ſecond book of LOCKE's Eſſay, is to ſhow, that all our ſimple ideas, without exception, are derived from the one or the other, or both of theſe ſources. In doing this, the author is led into ſome paradoxes, although, in general, he is not fond of paradoxes: And had he foreſeen all the conſequences that may be drawn from his account of the origin of our ideas, he would probably have examined it more carefully.

Mr. HUME adopts LOCKE's account of the origin of our ideas, and from that principle infers, that we have no idea of ſubſtance corporeal or ſpiritual, no idea of power, no other idea of a cauſe, but that it is ſomething antecedent, and conſtantly conjoined to that which we call its effects; and, in a word, that we can have no idea of any thing but our ſenſations, and the operations of mind we are conſcious of.

This

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This author leaves no power to the mind in framing its ideas and impreſſions; and no wonder, ſince he holds that we have no idea of power; and the mind is nothing but that ſucceſſion of impreſſions and ideas of which we are intimately conſcious.

He thinks, therefore, that our impreſſions ariſe from unknown cauſes, and that the impreſſions are the cauſes of their correſponding ideas. By this he means no more but that they always go before the ideas; for this is all that is neceſſary to conſtitute the relation of cauſe and effect.

As to the order and ſucceſſion of our ideas, he holds it to be determined by three laws of attraction or aſſociation, which he takes to be original properties of the ideas, by which they attract, as it were, or aſſociate themſelves with other ideas which either reſemble them, or which have been contiguous to them in time and place, or to which they have the relations of cauſe and effect.

We may here obſerve by the way, that the laſt of theſe three laws ſeems to be included in the ſecond, ſince cauſation, according to him, implies no more than contiguity in time and place.

It is not my deſign at preſent to ſhow how Mr. HUME, upon the principles he has borrowed from LOCKE and BERKELEY, has with great acuteneſs, reared a ſyſtem of abſolute ſcepticiſm, which leaves no rational ground to believe any one propoſition, rather than its contrary: My intention in this place being only to give a detail of the ſentiments of Philoſophers concerning ideas ſince they became an object of ſpeculation, and concerning the man-

CHAP. XIII. ner of our perceiving external objects by their means.

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Of the Sentiments of ANTONY ARNAULD.

IN this ſketch of the opinions of Philoſophers concerning ideas, we muſt not omit ANTONY ARNAULD, doctor of the Sorbonne, who, in the year 1683, publiſhed his book of True and Falſe Ideas, in oppoſition to the ſyſtem of MALEBRANCHE before mentioned. It is only about ten years ſince I could find this book, and I believe it is rare.

Though ARNAULD wrote before LOCKE, BERKELEY, and HUME, I have reſerved to the laſt place ſome account of his ſentiments, becauſe it ſeems difficult to determine whether he adopted the common theory of ideas, or whether he is ſingular in rejecting it altogether as a fiction of Philoſophers.

The controverſy between MALEBRANCHE and ARNAULD neceſſarily led them to conſider what kind of things ideas are, a point upon which other Philoſophers had very generally been ſilent. Both of them profeſſed the doctrine univerſally received, that we perceive not material things immediately, that it is their ideas that are the immediate objects of our thought, and that it is in the idea of every thing that we perceive its properties.

It is neceſſary to premiſe, that both theſe authors uſe the word *perception*, as DES CARTES had done before them, to ſignify every operation of the underſtanding. "To think, to "know,

" know, to perceive, are the ſame thing," ſays Mr. ARNAULD, chap. 5. def. 2. It is likewiſe to be obſerved, that the various operations of the mind are by both called modifications of the mind. Perhaps they were led into this phraſe by the Carteſian doctrine, that the eſſence of the mind conſiſts in thinking, as that of body conſiſts in extenſion. I apprehend, therefore, that when they make ſenſation, perception, memory, and imagination, to be various modifications of the mind, they mean no more, but that theſe are things which can only exiſt in the mind as their ſubject. We expreſs the ſame thing, by calling them various modes of thinking, or various operations of the mind. CHAP. XIII.

The things which the mind perceives, ſays MALEBRANCHE, are of two kinds. They are either in the mind itſelf, or they are external to it. The things in the mind, are all its different modifications, its ſenſations, its imaginations, its pure intellections, its paſſions and affections. Theſe are immediately perceived; we are conſcious of them, and have no need of ideas to repreſent them to us.

Things external to the mind, are either corporeal or ſpiritual. With regard to the laſt, he thinks it poſſible, that, in another ſtate, ſpirits may be an immediate object of our underſtandings, and ſo be perceived without ideas; that there may be ſuch an union of ſpirits as that they may immediately perceive each other, and communicate their thoughts mutually, without ſigns, and without ideas.

But leaving this as a problematical point, he holds it to be undeniable, that material things cannot be perceived immediately, but only by the mediation of ideas. He thought it like-

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wise undeniable, that the idea must be immediately present to the mind, that it must touch the soul as it were, and modify its perception of the object.

From these principles we must necessarily conclude, either that the idea is some modification of the human mind, or that it must be an idea in the Divine Mind, which is always intimately present with our minds. The matter being brought to this alternative, MALEBRANCHE considers first all the possible ways such a modification may be produced in our mind as that we call an idea of a material object, taken it for granted always, that it must be an object perceived, and something different from the act of the mind in perceiving it. He finds insuperable objections against every hypothesis of such ideas being produced in our minds, and therefore concludes, that the immediate objects of perception are the ideas of the Divine Mind.

Against this system ARNAULD wrote his book of True and False Ideas. He does not object to the alternative mentioned by MALEBRANCHE; but he maintains, that ideas are modifications of our minds. And finding no other modification of the human mind which can be called the idea of an external object, he says it is only another word for perception. Chap. 5. def. 3. "I take the idea of an object, and the "perception of an object, to be the same thing. "I do not say whether there may be other "things to which the name of idea may be "given. But it is certain that there are ideas "taken in this sense, and that these ideas are "either attributes or modifications of our "minds."

This,

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This, I think indeed, was to attack the syſtem of MALEBRANCHE upon its weak ſide, and where, at the ſame time, an attack was leaſt expected. Philoſophers had been ſo unanimous in maintaining that we do not perceive external objects immediately, but by certain repreſentative images of them called *ideas*, that MALEBRANCHE might well think his ſyſtem ſecure upon that quarter, and that the only queſtion to be determined was, In what ſubject thoſe ideas are placed, whether in the human or in the divine mind?

But, ſays Mr. ARNAULD, thoſe ideas are mere chimeras, fictions of Philoſophers; there are no ſuch beings in nature; and therefore it is to no purpoſe to enquire whether they are in the divine or in the human mind. The only true and real ideas are our perceptions, which are acknowledged by all Philoſophers, and by MALEBRANCHE himſelf, to be acts or modifications of our own minds. He does not ſay that the fictitious ideas were a fiction of MALEBRANCHE. He acknowledges that they had been very generally maintained by the ſcholaſtic Philoſophers, and points out, very judiciouſly, the prejudices that had led them into the belief of ſuch ideas.

Of all the powers of our mind, the external ſenſes are thought to be the beſt underſtood, and their objects are the moſt familiar. Hence we meaſure other powers by them, and transfer to other powers the language which properly belongs to them. The objects of ſenſe muſt be preſent to the ſenſe, or within its ſphere, in order to their being perceived. Hence, by analogy, we are led to ſay of every thing when we think of it, that it is preſent to the mind, or

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or in the mind. But this preſence is metaphorical, or analogical only; and ARNAULD calls it objective preſence, to diſtinguiſh it from that local preſence which is required in objects that are perceived by ſenſe. But both being called by the ſame name, they are confounded together, and thoſe things that belong only to real or local preſence, are attributed to the metaphorical.

We are likewiſe accuſtomed to ſee objects by their images in a mirror, or in water; and hence are led, by analogy, to think that objects may be preſented to the memory or imagination, in ſome ſimilar manner, by images, which Philoſophers have called *ideas*.

By ſuch prejudices and analogies, ARNAULD conceives, men have been led to believe, that the objects of memory and imagination muſt be preſented to the mind by images or ideas; and the Philoſophers have been more carried away by theſe prejudices than even the vulgar, becauſe the uſe made of this theory was to explain and account for the various operations of the mind, a matter in which the vulgar take no concern.

He thinks, however, that DES CARTES had got the better of theſe prejudices, and that he uſes the word idea as ſignifying the ſame thing with perception, and is therefore ſurpriſed that a diſciple of DES CARTES, and one who was ſo great an admirer of him as MALEBRANCHE was, ſhould be carried away by them. It is ſtrange, indeed, that the two moſt eminent diſciples of DES CARTES, and his cotemporaries, ſhould differ ſo eſſentially with regard to his doctrine concerning ideas.

I ſhall not attempt to give the reader an account of

of the continuation of this controverſy between thoſe two acute Philoſophers, in the ſubſequent defences and replies; becauſe I have not acceſs to ſee them. After much reaſoning, and ſome animoſity, each continued in his own opinion, and left his antagoniſt where he found him. MALEBRANCHE's opinion of our ſeeing all things in God, ſoon died away of itſelf; and ARNAULD's notion of ideas ſeems to have been leſs regarded than it deſerved, by the Philoſophers that came after him; perhaps for this reaſon, among others, that it ſeemed to be in ſome ſort given up by himſelf, in his attempting to reconcile it to the common doctrine concerning ideas. CHAP. XIII.

From the account I have given, one would be apt to conclude that ARNAULD totally denied the exiſtence of ideas, in the philoſophical ſenſe of that word, and that he adopted the notion of the vulgar, who acknowledge no object of perception but the external object. But he ſeems very unwilling to deviate ſo far from the common track, and what he had given up with one hand he takes back with the other.

For, *firſt*, Having defined ideas to be the ſame thing with perceptions, he adds this qualification to his definition: "I do not here "conſider whether there are other things that "may be called ideas; but it is certain there "are ideas taken in this ſenſe." I believe, indeed, there is no Philoſopher who does not, on ſome occaſions, uſe the word idea in this popular ſenſe.

Secondly, He ſupports this popular ſenſe of the word by the authority of DES CARTES, who, in his demonſtration of the exiſtence of God

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God from the idea of him in our minds, defines an idea thus: "By the word *idea*, I "underſtand that form of any thought, by "the immediate perception of which I am "conſcious of that thought; ſo that I can "expreſs nothing by words, with under-"ſtanding, without being certain that there "is in my mind the idea of that which is ex-"preſſed by the words." This definition ſeems indeed to be of the ſame import with that which is given by ARNAULD. But DES CARTES adds a qualification to it, which ARNAULD, in quoting it, omits; and which ſhews, that DES CARTES meant to limit his definition to the idea then treated of, that is, to the idea of the Deity; and that there are other ideas to which this definition does not apply. For he adds: "And thus I give the "name of idea, not ſolely to the images "painted in the phantaſy. Nay, in this "place, I do not at all give the name of ideas "to thoſe images, in ſo far as they are "painted in the corporeal phantaſy that is in "ſome part of the brain, but only in ſo far "as they inform the mind, turning its at-"tention to that part of the brain."

Thirdly, ARNAULD has employed the whole of his ſixth chapter, to ſhew that theſe ways of ſpeaking, common among Philoſophers, to wit, *that we perceive not things immediately; that it is their ideas that are the immediate objects of our thoughts; that it is in the idea of every thing that we perceive its properties*, are not to be rejected, but are true when rightly underſtood. He labours to reconcile theſe expreſſions to his own definition of ideas, by obſerving, that every perception and every thought

thought is neceſſarily conſcious of itſelf, and reflects upon itſelf; and that, by this conſciouſneſs and reflection, it is its own immediate object. Whence he infers, that the idea, that is, the perception, is the immediate object of perception.

This looks like a weak attempt to reconcile two inconſiſtent doctrines by one who wiſhes to hold both. It is true, that conſciouſneſs always goes along with perception; but they are different operations of the mind, and they have their different objects. Conſciouſneſs is not perception, nor is the object of conſciouſneſs the object of perception. The ſame may be ſaid of every operation of mind that has an object. Thus, injury is the object of reſentment. When I reſent an injury, I am conſcious of my reſentment; that is, my reſentment is the immediate and the only object of my conſciouſneſs; but it would be abſurd to infer from this, that my reſentment is the immediate object of my reſentment.

Upon the whole, if ARNAULD, in conſequence of his doctrine, that ideas, taken for repreſentative images of external objects, are a mere fiction of the Philoſophers, had rejected boldly the doctrine of DES CARTES, as well as of the other Philoſophers, concerning thoſe fictitious beings, and all the ways of ſpeaking that imply their exiſtence, I ſhould have thought him more conſiſtent with himſelf, and his doctrine concerning ideas more rational and more intelligible than that of any other author of my acquaintance who has treated of the ſubject.

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Reflections on the common Theory of Ideas.

AFTER so long a detail of the sentiments of Philosophers, ancient and modern, concerning ideas, it may seem presumptuous to call in question their existence. But no philosophical opinion, however ancient, however generally received, ought to rest upon authority. There is no presumption in requiring evidence for it, or in regulating our belief by the evidence we can find.

To prevent mistakes, the reader must again be reminded, that if by ideas are meant only the acts or operations of our minds in perceiving, remembering, or imagining objects, I am far from calling in question the existence of those acts; we are conscious of them every day, and every hour of life; and I believe no man of a sound mind ever doubted of the real existence of the operations of mind, of which he is conscious. Nor is it to be doubted, that, by the faculties which God has given us, we can conceive things that are absent, as well as perceive those that are within the reach of our senses; and that such conceptions may be more or less distinct, and more or less lively and strong. We have reason to ascribe to the all-knowing and all-perfect Being distinct conceptions of all things existent and possible, and of all their relations; and if these conceptions are called his eternal ideas, there ought to be no dispute among Philosophers about a word. The ideas, of whose existence I require the proof,

proof, are not the operations of any mind, but ſuppoſed objects of thoſe operations. They are not perception, remembrance, or conception, but things that are ſaid to be perceived, or remembered, or imagined.

Nor do I diſpute the exiſtence of what the vulgar call the objects of perception. Theſe, by all who acknowledge their exiſtence, are called real things, not ideas. But Philoſophers maintain, that, beſides theſe, there are immediate objects of perception in the mind itſelf: That, for inſtance, we do not ſee the ſun immediately, but an idea; or, as Mr. HUME calls it, an impreſſion, in our own minds. This idea is ſaid to be the image, the reſemblance, the repreſentative of the ſun, if there be a ſun. It is from the exiſtence of the idea that we muſt infer the exiſtence of the ſun. But the idea, being immediately perceived, there can be no doubt, as Philoſophers think, of its exiſtence.

In like manner, when I remember, or when I imagine any thing, all men acknowledge that there muſt be ſomething that is remembered, or that is imagined; that is, ſome object of thoſe operations. The object remembered muſt be ſomething that did exiſt in time paſt. The object imagined may be ſomething that never exiſted. But, ſay the Philoſophers, beſides theſe objects which all men acknowledge, there is a more immediate object which really exiſts in the mind at the ſame time we remember or imagine. This object is an idea or image of the thing remembered or imagined.

The *firſt* reflection I would make on this philoſophical opinion is, That it is directly contrary

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contrary to the univerſal ſenſe of men who have not been inſtructed in philoſophy. When we ſee the ſun or moon, we have no doubt that the very objects which we immediately ſee, are very far diſtant from us, and from one another. We have not the leaſt doubt that this is the ſun and moon which God created ſome thouſands of years ago, and which have continued to perform their revolutions in the heavens ever ſince. But how are we aſtoniſhed when the Philoſopher informs us, that we are miſtaken in all this; that the ſun and moon which we ſee, are not, as we imagine, many miles diſtant from us, and from each other, but they are in our own mind; that they had no exiſtence before we ſaw them, and will have none when we ceaſe to perceive and to think of them; becauſe the objects we perceive are only ideas in our own minds, which can have no exiſtence a moment longer than we think of them.

If a plain man, uninſtructed in philoſophy, has faith to receive theſe myſteries, how great muſt be his aſtoniſhment. He is brought into a new world where every thing he ſees, taſtes, or touches, is an idea; a fleeting kind of being which he can conjure into exiſtence, or can annihilate in the twinkling of an eye.

After his mind is ſomewhat compoſed, it will be natural for him to aſk his philoſophical inſtructor, Pray, Sir, are there then no ſubſtantial and permanent beings called the ſun and moon, which continue to exiſt whether we think of them or not?

Here the Philoſophers differ. Mr. Locke, and thoſe that were before him, will anſwer to this queſtion, That it is very true, there are ſubſtantial

ſubſtential and permanent beings called the ſun and moon; but they never appear to us in their own perſon, but by their repreſentatives, the ideas in our own minds, and we know nothing of them but what we can gather from thoſe ideas.

Biſhop BERKELEY and Mr. HUME would give a different anſwer to the queſtion propoſed: They would aſſure the queriſt, that it is a vulgar error, a mere prejudice of the ignorant and unlearned, to think that there are any permanent and ſubſtantial beings called the ſun and moon; that the heavenly bodies, our own bodies, and all bodies whatſoever, are nothing but ideas in our minds; and that there can be nothing like the ideas of one mind, but the ideas of another mind. There is nothing in nature but minds and ideas, ſays the Biſhop, nay, ſays Mr. HUME, there is nothing in nature but ideas only; for what we call a mind is nothing but a train of ideas connected by certain relations between themſelves.

In this repreſentation of the theory of ideas, there is nothing exaggerated or miſrepreſented, as far as I am able to judge; and ſurely nothing farther is neceſſary to ſhew, that, to the uninſtructed in philoſophy, it muſt appear extravagant and viſionary, and moſt contrary to the dictates of common underſtanding.

There is the leſs need of any farther proof of this, that it is very amply acknowledged by Mr. HUME in his Eſſay on the academical or ſceptical Philoſophy. "It ſeems evident, ſays "he," that men are carried by a natural in- "ſtinct, or prepoſſeſſion, to repoſe faith in "their ſenſes; and that without any reaſon- "ing, or even almoſt before the uſe of reaſon, "we always ſuppoſe an external univerſe, "which

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" which depends not on our perception, but " would exiſt though we and every ſenſible " creature were abſent or annihilated. Even " the animal creation are governed by a like " opinion, and preſerve this belief of external " objects in all their thoughts, deſigns, and " actions."

" It ſeems alſo evident, that when men fol- " low this blind and powerful inſtinct of na- " ture, they always ſuppoſe the very images " preſented by the ſenſes to be the external " objects, and never entertain any ſuſpicion, " that the one are nothing but repreſentations " of the other. This very table which we ſee " white, and feel hard, is believed to exiſt " independent of our perception, and to be " ſomething external to the mind which per- " ceives it; our preſence beſtows not being " upon it; our abſence annihilates it not: It " preſerves its exiſtence uniform and entire, " independent of the ſituation of intelligent " beings who perceive or contemplate it.

" But this univerſal and primary notion of " all men is ſoon deſtroyed by the ſlighteſt " philoſophy, which teaches us, that nothing " can ever be preſent to the mind, but an " image or perception; and that the ſenſes " are only the inlets through which theſe " images are received, without being ever " able to produce any immediate intercourſe " between the mind and the object."

It is therefore acknowledged by this Philoſopher, to be a natural inſtinct or prepoſſeſſion, an univerſal and primary opinion of all men, a primary inſtinct of nature, that the objects which we immediately perceive by our ſenſes, are

are not images in our minds, but external objects, and that their exiſtence is independent of us, and our perception.

In this acknowledgment, Mr. HUME indeed ſeems to me more generous, and even more ingenuous than Biſhop BERKELEY, who would perſuade us, that his opinion does not oppoſe the vulgar opinion, but only that of the Philoſophers; and that the external exiſtence of a material world is a philoſophical hypotheſis and not the natural dictate of our perceptive powers. The Biſhop ſhows a timidity of engaging ſuch an adverſary, as a primary and univerſal opinion of all men. He is rather fond to court its patronage. But the Philoſopher intrepidly gives a defiance to this antagoniſt, and ſeems to glory in a conflict that was worthy of his arm. *Optat aprum aut fulvum deſcendere monte leonem.* After all, I ſuſpect that a Philoſopher, who wages war with this adverſary, will find himſelf in the ſame condition as a Mathematician who ſhould undertake to demonſtrate, that there is no truth in the axioms of mathematics.

A *ſecond* reflection upon this ſubject is, That the authors who have treated of ideas, have generally taken their exiſtence for granted, as a thing that could not be called in queſtion; and ſuch arguments as they have mentioned incidentally, in order to prove it, ſeem too weak to ſupport the concluſion.

Mr. LOCKE, in the introduction to his Eſſay, tells us, that he uſes the word idea to ſignify whatever is the immediate object of thought; and then adds, "I preſume it will be eaſily "granted me that there are ſuch ideas in "mens minds; every one is conſcious of them "in

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" in himself, and mens words and actions " will satisfy him that they are in others." I am indeed conscious of perceiving, remembering, imagining; but that the objects of these operations are images in my mind, I am not conscious. I am satisfied by mens words and actions, that they often perceive the same objects which I perceive, which could not be, if those objects were ideas in their own minds.

Mr. NORRIS is the only author I have met with, who professedly puts the question, Whether material things can be perceived by us immediately? He has offered four arguments to show that they cannot. *First*, " Material objects are without the mind, and therefore there can be no union between the object and the percipient." *Answer*, This argument is lame, until it is shown to be necessary that in perception there should be a union between the object and the percipient. *Second*, " Ma- " terial objects are disproportioned to the " mind, and removed from it by the whole " diameter of Being." This argument I cannot answer, because I do not understand it. *Third*, " Because, if material objects were " immediate objects of perception, there could " be no physical science; things necessary " and immutable being the only object of " science." *Answer*, Although things necessary and immutable be not the immediate objects of perception, they may be immediate objects of other powers of the mind. *Fourth*, " If material things were perceived by them- " selves, they would be a true light to our " minds, as being the intelligible form of our " understandings, and consequently perfective " of them, and indeed superior to them."

If

If I comprehend any thing of this myſterious argument, it follows from it, that the Deity perceives nothing at all, becauſe nothing can be ſuperior to his underſtanding, or perfective of it.

There is an argument which is hinted at by MALEBRANCHE, and by ſeveral other authors, which deſerves to be more ſeriouſly conſidered. As I find it moſt clearly expreſſed, and moſt fully urged by Dr. SAMUEL CLARKE, I ſhall give it in his words, in his ſecond reply to LEIBNITZ, ſect. 4. "The ſoul, without "being preſent to the images of the things "perceived, could not poſſibly perceive them. "A living ſubſtance can only there perceive, "where it is preſent, either to the things "themſelves, (as the omnipreſent God is to "the whole univerſe), or to the images of "things, as the ſoul is in its proper *ſenſo-* "*rium.*"

Sir ISAAC NEWTON expreſſes the ſame ſentiment, but with his uſual reſerve, in a query only.

The ingenious Dr. PORTERFIELD, in his Eſſay concerning the motions of our eyes, adopts this opinion with more confidence. His words are: "How body acts upon mind, "or mind upon body, I know not; but this "I am very certain of, that nothing can act, "or be acted upon, where it is not; and "therefore our mind can never perceive any "thing but its own proper modifications, and "the various ſtates of the ſenſorium, to which "it is preſent: So that it is not the external "ſun and moon which are in the heavens, "which our mind perceives, but only their "image or repreſentation impreſſed upon the

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" ſenſorium. How the ſoul of a ſeeing man " ſees theſe images, or how it receives thoſe " ideas, from ſuch agitations in the ſenſorium, " I know not; but I am ſure it can never " perceive the external bodies themſelves, to " which it is not preſent."

Theſe, indeed, are great authorities; but, in matters of philoſophy, we muſt not be guided by authority, but by reaſon. Dr. CLARKE, in the place cited, mentions ſlightly, as the reaſon of his opinion, that " no- " thing can any more act, or be acted upon, " when it is not preſent, than it can be where " it is not." And again, in his third reply to LEIBNITZ, ſect. 11. " We are ſure the " ſoul cannot perceive what it is not preſent " to, becauſe nothing can act, or be acted " upon, where it is not." The ſame reaſon we ſee is urged by Dr. PORTERFIELD.

That nothing can act immediately where it is not, I think muſt be admitted; for I agree with Sir ISAAC NEWTON, that power without ſubſtance is inconceivable. It is a conſequence of this, that nothing can be acted upon immediately where the agent is not preſent: Let this therefore be granted. To make the reaſoning concluſive, it is farther neceſſary, that, when we perceive objects, either they act upon us, or we act upon them. This does not appear ſelf-evident, nor have I ever met with any proof of it. I ſhall briefly offer the reaſons why I think it ought not to be admitted.

When we ſay that one being acts upon another, we mean that ſome power or force is exerted by the agent, which produces, or has a tendency to produce, a change in the thing acted

acted upon. If this be the meaning of the phrase, as I conceive it is, there appears no reason for asserting, that, in perception, either the object acts upon the mind, or the mind upon the object.

An object, in being perceived, does not act at all. I perceive the walls of the room where I sit; but they are perfectly inactive, and therefore act not upon the mind. To be perceived, is what Logicians call an external denomination, which implies neither action nor quality in the object perceived. Nor could men ever have gone into this notion, that perception is owing to some action of the object upon the mind, were it not, that we are so prone to form our notions of the mind from some similitude we conceive between it and body. Thought in the mind is conceived to have some analogy to motion in a body: And as a body is put in motion, by being acted upon by some other body; so we are apt to think the mind is made to perceive, by some impulse it receives from the object. But reasonings, drawn from such analogies, ought never to be trusted. They are, indeed, the cause of most of our errors with regard to the mind. And we might as well conclude, that minds may be measured by feet and inches, or weighed by ounces and drachms, because bodies have those properties.

I see as little reason, in the second place, to believe, that in perception the mind acts upon the object. To perceive an object is one thing; to act upon it is another: Nor is the last at all included in the first. To say, that I act upon the wall, by looking at it, is an abuse of language, and has no meaning. Logicians

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diſtinguiſh two kinds of operations of mind; the firſt kind produces no effect without the mind; the laſt does. The firſt they call *immanent acts*, the ſecond *tranſitive*. All intellectual operations belong to the firſt claſs; they produce no effect upon any external object. But without having recourſe to logical diſtinctions, every man of common ſenſe knows, that to think of an object, and to act upon it, are very different things.

As we have therefore no evidence, that, in perception, the mind acts upon the object, or the object upon the mind, but ſtrong reaſons to the contrary; Dr. CLARKE's argument againſt our perceiving external objects immediately falls to the ground.

This notion, that, in perception, the object muſt be contiguous to the percipient, ſeems, with many other prejudices, to be borrowed from analogy. In all the external ſenſes, there muſt, as has been before obſerved, be ſome impreſſion made upon the organ of ſenſe by the object, or by ſomething coming from the object. An impreſſion ſuppoſes contiguity. Hence we are led by analogy to conceive ſomething ſimilar in the operations of the mind. Many Philoſophers reſolve almoſt every operation of mind into impreſſions and feelings, words manifeſtly borrowed from the ſenſe of touch. And it is very natural to conceive contiguity neceſſary between that which makes the impreſſion, and that which receives it; between that which feels, and that which is felt. And though no Philoſopher will now pretend to juſtify ſuch analogical reaſoning as this; yet it has a powerful

erful influence upon the judgment, while we contemplate the operations of our minds, only as they appear through the deceitful medium of ſuch analogical notions and expreſſions.

When we lay aſide thoſe analogies, and reflect attentively upon our perception of the objects of ſenſe, we muſt acknowledge, that, though we are conſcious of perceiving objects, we are altogether ignorant how it is brought about; and know as little how we perceive objects as how we were made. And if we ſhould admit an image in the mind, or contiguous to it, we know as little how perception may be produced by this image as by the moſt diſtant object. Why therefore ſhould we be led, by a theory which is neither grounded on evidence, nor, if admitted, can explain any one phænomenon of perception, to reject the natural and immediate dictates of thoſe perceptive powers, to which, in the conduct of life, we find a neceſſity of yielding implicit ſubmiſſion?

There remains only one other argument that I have been able to find urged againſt our perceiving external objects immediately. It is propoſed by Mr. HUME, who, in the Eſſay already quoted, after acknowledging that it is an univerſal and primary opinion of all men, that we perceive external objects immediately, ſubjoins what follows.

"But this univerſal and primary opinion of "all men is ſoon deſtroyed by the ſlighteſt "philoſophy, which teaches us, that nothing "can ever be preſent to the mind but an "image or perception; and that the ſenſes "are

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" are only the inlets through which theſe ima-
" ges are received, without being ever able to
" produce any immediate intercourſe between
" the mind and the object. The table, which
" we ſee, ſeems to diminiſh as we remove
" farther from it: But the real table, which
" exiſts independent of us, ſuffers no altera-
" tion. It was therefore nothing but its
" image which was preſent to the mind.
" Theſe are the obvious dictates of reaſon;
" and no man who reflects, ever doubted
" that the exiſtences which we conſider,
" when we ſay *this houſe*, and *that tree*, are
" nothing but perceptions in the mind, and
" fleeting copies and repreſentations of other
" exiſtences, which remain uniform and in-
" dependent. So far then, we are neceſſita-
" ted, by reaſoning, to depart from the pri-
" mary inſtincts of nature, and to embrace a
" new ſyſtem with regard to the evidence of
" our ſenſes."

We have here a remarkable conflict between two contradictory opinions, wherein all mankind are engaged. On the one ſide ſtand all the vulgar, who are unpractiſed in philoſophical reſearches, and guided by the uncorrupted primary inſtincts of nature. On the other ſide, ſtand all the Philoſophers ancient and modern; every man without exception who reflects. In this diviſion, to my great humiliation, I find myſelf claſſed with the vulgar.

The paſſage now quoted is all I have found in Mr. HUME's writings upon this point; and indeed there is more reaſoning in it than I have found in any other author; I ſhall therefore examine it minutely.

Firſt, He tell us, That " this univerſal and
" primary opinion of all men is ſoon deſtroyed
" by

" by the ſlighteſt philoſophy, which teaches
" us, that nothing can ever be preſent to the
" mind but an image or perception."

The phraſe of being preſent to the mind has ſome obſcurity; but I conceive he means being an immediate object of thought; an immediate object, for inſtance, of perception, of memory, or of imagination. If this be the meaning, (and it is the only pertinent one I can think of), there is no more in this paſſage but an aſſertion of the propoſition to be proved, and an aſſertion that philoſophy teaches it. If this be ſo, I beg leave to diſſent from philoſophy till ſhe gives me reaſon for what ſhe teaches. For though common ſenſe and my external ſenſes demand my aſſent to their dictates upon their own authority, yet philoſophy is not entitled to this privilege. But that I may not diſſent from ſo grave a perſonage without giving a reaſon, I give this as the reaſon of my diſſent. I ſee the ſun when he ſhines; I remember the battle of Culloden; and neither of theſe objects is an image or perception.

He tells us in the next place, " That the
" ſenſes are only the inlets through which theſe
" images are received."

I know that ARISTOTLE and the ſchoolmen taught, that images or ſpecies flow from objects, and are let in by the ſenſes, and ſtrike upon the mind; but this has been ſo effectually refuted by DES CARTES, by MALEBRANCHE, and many others, that nobody now pretends to defend it. Reaſonable men conſider it as one of the moſt unintelligible and unmeaning parts of the ancient ſyſtem. To what cauſe is it owing that modern Philoſophers

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phers are so prone to fall back into this hypothesis, as if they really believed it? For of this proneness I could give many instances besides this of Mr. Hume; and I take the cause to be, that images in the mind, and images let in by the senses, are so nearly allied, and so strictly connected, that they must stand or fall together. The old system consistently maintained both: But the new system has rejected the doctrine of images let in by the senses, holding, nevertheless, that there are images in the mind; and, having made this unnatural divorce of two doctrines which ought not to be put asunder, that which they have retained often leads them back involuntarily to that which they have rejected.

Mr. Hume surely did not seriously believe that an image of sound is let in by the ear, an image of smell by the nose, an image of hardness and softness, of solidity and resistance, by the touch. For, besides the absurdity of the thing, which has often been shown, Mr. Hume, and all modern Philosophers maintain, that the images which are the immediate objects of perception have no existence when they are not perceived; whereas, if they were let in by the senses, they must be, before they are perceived, and have a separate existence.

He tells us farther, that philosophy teaches, that the senses are unable to produce any immediate intercourse between the mind and the object. Here, I still require the reasons that philosophy gives for this; for, to my apprehension, I immediately perceive external objects, and this I conceive is the immediate intercourse here meant.

Hitherto I see nothing that can be called an argument. Perhaps it was intended only for illustration.

illuſtration. The argument, the only argument follows: CHAP. XIV.

The table which we ſee, ſeems to diminiſh as we remove farther from it; but the real table which exiſts independent of us ſuffers no alteration: It was therefore nothing but its image which was preſented to the mind. Theſe are the obvious dictates of reaſon.

To judge of the ſtrength of this argument, it is neceſſary to attend to a diſtinction which is familiar to thoſe who are converſant in the mathematical ſciences, I mean the diſtinction between real and apparent magnitude. The real magnitude of a line is meaſured by ſome known meaſure of length, as inches, feet, or miles: The real magnitude of a ſurface or ſolid, by known meaſures of ſurface or of capacity. This magnitude is an object of touch only, and not of ſight; nor could we even have had any conception of it, without the ſenſe of touch; and Biſhop BERKELEY, on that account, calls it *tangible magnitude*.

Apparent magnitude is meaſured by the angle which an object ſubtends at the eye. Suppoſing two right lines drawn from the eye to the extremities of the object making an angle, of which the object is the ſubtenſe, the apparent magnitude is meaſured by this angle. This apparent magnitude is an object of ſight, and not of touch. Biſhop BERKELEY calls it *viſible magnitude*.

If it is aſked, what is the apparent magnitude of the ſun's diameter? the anſwer is, that it is about thirty-one minutes of a degree. But if it is aſked, what is the real magnitude of the ſun's diameter? the anſwer muſt be, ſo many thouſand miles, or ſo many diameters of the

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the earth. From which it is evident, that real magnitude, and apparent magnitude, are things of a different nature, though the name of magnitude is given to both. The firſt has three dimenſions, the laſt only two. The firſt is meaſured by a line, the laſt by an angle.

From what has been ſaid, it is evident that the real magnitude of a body muſt continue unchanged, while the body is unchanged. This we grant. But it is likewiſe evident, that the apparent magnitude muſt continue the ſame while the body is unchanged? So far otherwiſe, that every man who knows any thing of mathematics can eaſily demonſtrate, that the ſame individual object, remaining in the ſame place, and unchanged, muſt neceſſarily vary in its apparent magnitude, according as the point from which it is ſeen is more or leſs diſtant; and that its apparent length or breadth will be nearly in a reciprocal proportion to the diſtance of the ſpectator. This is as certain as the principles of geometry.

We muſt likewiſe attend to this, that though the real magnitude of a body is not originally an object of ſight, but of touch, yet we learn by experience to judge of the real magnitude in many caſes by ſight. We learn by experience to judge of the diſtance of a body from the eye within certain limits; and from its diſtance and apparent magnitude taken together, we learn to judge of its real magnitude.

And this kind of judgment, by being repeated every hour, and almoſt every minute of our lives, becomes, when we are grown up, ſo ready and ſo habitual, that it very much

much reſembles the original perceptions of our ſenſes, and may not improperly be called *acquired perception*. CHAP. XIV.

Whether we call it judgment or perception is a verbal difference. But it is evident, that, by means of it, we often diſcover by one ſenſe things which are properly and naturally the objects of another. Thus I can ſay without impropriety, I hear a drum, I hear a great bell, or I hear a ſmall bell; though it is certain that the figure or ſize of the ſounding body is not originally an object of hearing. In like manner, we learn by experience how a body of ſuch a real magnitude, and at ſuch a diſtance appears to the eye: But neither its real magnitude, nor its diſtance from the eye, are properly objects of ſight, any more than the form of a drum, or the ſize of a bell, are properly objects of hearing.

If theſe things be conſidered, it will appear, that Mr. HUME's argument hath no force to ſupport his concluſion, nay, that it leads to a contrary concluſion. The argument is this, the table we ſee ſeems to diminiſh as we remove farther from it; that is, its apparent magnitude is diminiſhed; but the real table ſuffers no alteration, to wit, in its real magnitude; therefore it is not the real table we ſee: I admit both the premiſes in this ſyllogiſm, but I deny the concluſion. The ſyllogiſm has what the Logicians call two middle terms: Apparent magnitude is the middle term in the firſt premiſe; real magnitude in the ſecond. Therefore, according to the rules of logic, the concluſion is not juſtly drawn from the premiſes; but, laying aſide the rules of logic, let us examine it by the light of common ſenſe.

Let

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Let us ſuppoſe, for a moment, that it is the real table we ſee: Muſt not this real table ſeem to diminiſh as we remove farther from it? It is demonſtrable that it muſt. How then can this apparent diminution be an argument that it is not the real table? When that which muſt happen to the real table, as we remove farther from it, does actually happen to the table we ſee, it is abſurd to conclude from this, that it is not the real table we ſee. It is evident therefore, that this ingenious author has impoſed upon himſelf by confounding real magnitude with apparent magnitude, and that his argument is a mere ſophiſm.

I obſerved that Mr. HUME's argument not only has no ſtrength to ſupport his concluſion, but that it leads to the contrary concluſion; to wit, that it is the real table we ſee; for this plain reaſon, that the table we ſee has preciſely that apparent magnitude which it is demonſtrable the real table muſt have when placed at that diſtance.

This argument is made much ſtronger by conſidering, that the real table may be placed ſucceſſively at a thouſand different diſtances; and in every diſtance, in a thouſand different poſitions; and it can be determined demonſtratively, by the rules of geometry and perſpective, what muſt be its apparent magnitude, and apparent figure, in each of thoſe diſtances and poſitions. Let the table be placed ſucceſſively in as many of thoſe different diſtances, and different poſitions, as you will, or in them all; open your eyes and you ſhall ſee a table preciſely of that apparent magnitude, and that apparent figure, which the real table muſt have in that diſtance, and in that poſition. Is not this a ſtrong argument that it is the real table you ſee?

In

In a word, the appearance of a visible object is infinitely diversified, according to its distance and position. The visible appearances are innumerable, when we confine ourselves to one object, and they are multiplied according to the variety of objects. Those appearances have been matter of speculation to ingenious men, at least since the time of EUCLID. They have accounted for all this variety, on the supposition, that the objects we see are external, and not in the mind itself. The rules they have demonstrated about the various projections of the sphere, about the appearances of the planets in their progressions, stations, and retrogradations, and all the rules of perspective, are built on the supposition that the objects of sight are external. They can each of them be tried in thousands of instances. In many arts and professions innumerable trials are daily made; nor were they ever found to fail in a single instance. Shall we say that a false supposition, invented by the rude vulgar, has been so lucky in solving an infinite number of phænomena of nature? This surely would be a greater prodigy than philosophy ever exhibited: Add to this, that upon the contrary hypothesis, to wit, that the objects of sight are internal, no account can be given of any one of those appearances, nor any physical cause assigned why a visible object should, in any one case, have one apparent figure and magnitude rather than another.

Thus I have considered every argument I have found advanced to prove the existence of ideas, or images of external things, in the mind: And if no better arguments can be found,

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found, I connot help thinking, that the whole hiſtory of philoſophy has never furniſhed an inſtance of an opinion ſo unanimouſly entertained by Philoſophers upon ſo ſlight grounds.

A *third* reflection I would make upon this ſubject is, That Philoſophers, notwithſtanding their unanimity as to the exiſtence of ideas, hardly agree in any one thing elſe concerning them. If ideas be not a mere fiction, they muſt be, of all objects of human knowledge, the things we have beſt acceſs to know, and to be acquainted with; yet there is nothing about which men differ ſo much.

Some have held them to be ſelf-exiſtent, others to be in the Divine Mind, others in our own minds, and others in the brain or *ſenſorium*; I conſidered the hypotheſis of images in the brain, in the fourth chapter of this Eſſay. As to images in the mind, if any thing more is meant by the images of an object in the mind than the thought of that object, I know not what it means. The diſtinct conception of an object may, in a metaphorical or analogical ſenſe, be called an *image* of it in the mind. But this image is only the conception of the object, and not the object conceived. It is an act of the mind, and not the object of that act.

Some Philoſophers will have our ideas, or a part of them, to be innate; others will have them all to be adventitious: Some derive them from the ſenſes alone; others from ſenſation and reflection: Some think they are fabricated by the mind itſelf; others that they are produced by external objects; others that they are the immediate operation of the Deity; others ſay, that impreſſions are the cauſes of

of ideas, and that the cauſes of impreſſions are unknown: Some think that we have ideas only of material objects, but none of minds, of their operations, or of the relations of things; others will have the immediate object of every thought to be an idea: Some think we have abſtract ideas, and that by this chiefly we are diſtinguiſhed from the brutes; others maintain an abſtract idea to be an abſurdity, and that there can be no ſuch thing: With ſome they are the immediate objects of thought, with others the only objects.

A *fourth* reflection is, That ideas do not make any of the operations of the mind to be better underſtood, although it was probably with that view that they have been firſt invented, and afterwards ſo generally received.

We are at a loſs to know how we perceive diſtant objects; how we remember things paſt; how we imagine things that have no exiſtence. Ideas in the mind ſeem to account for all theſe operations: They are all by the means of ideas reduced to one operation; to a kind of feeling, or immediate perception of things preſent, and in contact with the percipient; and feeling is an operation ſo familiar, that we think it needs no explication, but may ſerve to explain other operations.

But this feeling, or immediate perception, is as difficult to be comprehended, as the things which we pretend to explain by it. Two things may be in contact without any feeling or perception; there muſt therefore be in the percipient a power to feel or to perceive. How this power is produced, and how it operates, is quite beyond the reach of our knowledge. As little can we know whether this

power

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power must be limited to things present, and in contact with us. Nor can any man pretend to prove, that the Being, who gave us the power to perceive things present, may not give us the power to perceive things that are distant, to remember things past, and to conceive things that never existed.

Some Philosophers have endeavoured to make all our senses to be only different modifications of touch; a theory which serves only to confound things that are different, and to perplex and darken things that are clear. The theory of ideas resembles this, by reducing all the operations of the human understanding to the perception of ideas in our own minds. This power of perceiving ideas is as inexplicable as any of the powers explained by it: And the contiguity of the object contributes nothing at all to make it better understood; because there appears no connection between contiguity and perception, but what is grounded on prejudices, drawn from some imagined similitude between mind and body; and from the supposition, that, in perception, the object acts upon the mind, or the mind upon the object. We have seen how this theory has led Philosophers to confound those operations of mind, which experience teaches all men to be different, and teaches them to distinguish in common language; and that it has led them to invent a language inconsistent with the principles upon which all language is grounded.

The *last* reflection I shall make upon this theory, is, That the natural and necessary consequences of it furnish a just prejudice against it to

to every man who pays a due regard to the common ſenſe of mankind.

Not to mention, that it led the Pythagoreans and PLATO to imagine that we ſee only the ſhadows of external things, and not the things themſelves, and that it gave riſe to the Peripatetic doctrine of ſenſible *ſpecies*, one of the greateſt abſurdities of that ancient ſyſtem, let us only conſider the fruits it has produced, ſince it was new-modelled by DES CARTES. That great reformer in philoſophy ſaw the abſurdity of the doctrine of ideas coming from external objects, and refuted it effectually, after it had been received by Philoſophers for thouſands of years; but he ſtill retained ideas in the brain and in the mind. Upon this foundation all our modern ſyſtems of the powers of the mind are built. And the tottering ſtate of thoſe fabrics, though built by ſkilful hands, may give a ſtrong ſuſpicion of the unſoundneſs of the foundation.

It was this theory of ideas that led DES CARTES, and thoſe that followed him, to think it neceſſary to prove, by philoſophical arguments, the exiſtence of material objects. And who does not ſee that philoſophy muſt make a very ridiculous figure in the eyes of ſenſible men, while it is employed in muſtering up metaphyſical arguments, to prove that there is a ſun and a moon, an earth and a ſea: Yet we find theſe truly great men, DES CARTES, MALEBRANCHE, ARNAULD, and LOCKE, ſeriouſly employing themſelves in this argument.

Surely their principles led them to think, that all men, from the beginning of the world, believed the exiſtence of theſe things upon in-

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sufficient grounds, and to think that they would be able to place upon a more rational foundation this univerſal belief of mankind. But the misfortune is, that all the laboured arguments they have advanced, to prove the exiſtence of thoſe things we ſee and feel, are mere ſophiſms: Not one of them will bear examination.

I might mention ſeveral paradoxes, which Mr. LOCKE, though by no means fond of paradoxes, was led into by this theory of ideas. Such as, that the ſecondary qualities of body are no qualities of body at all, but ſenſations of the mind: That the primary qualities of body are reſemblances of our ſenſations: That we have no notion of duration, but from the ſucceſſion of ideas in our minds: That perſonal identity conſiſts in conſciouſneſs; ſo that the ſame individual thinking being may make two or three different perſons, and ſeveral different thinking beings make one perſon: That judgment is nothing but a perception of the agreement or diſagreement of our ideas.

Moſt of theſe paradoxes I ſhall have occaſion to examine.

However, all theſe conſequences of the doctrine of ideas were tolerable, compared with thoſe which came afterwards to be diſcovered by BERKELEY and HUME. That there is no material world: No abſtract ideas or notions: That the mind is only a train of related impreſſions and ideas, without any ſubject on which they may be impreſſed: That there is neither ſpace nor time, body nor mind, but impreſſions and ideas only: And, to ſum up all, That there is no probability, even in demonſtration

monſtration itſelf, nor any one propoſition more probable than its contrary. CHAP. XIV.

Theſe are the noble fruits which have grown upon this theory of ideas, ſince it began to be cultivated by ſkilful hands. It is no wonder that ſenſible men ſhould be diſguſted at philoſophy, when ſuch wild and ſhocking paradoxes paſs under its name. However, as theſe paradoxes have, with great acuteneſs and ingenuity, been deduced by juſt reaſoning from the theory of ideas, they muſt at laſt bring this advantage, that poſitions ſo ſhocking to the common ſenſe of mankind, and ſo contrary to the deciſions of all our intellectual powers, will open mens eyes, and break the force of the prejudice which hath held them entangled in that theory.

CHAP. XV.

Account of the Syſtem of LEIBNITZ.

THERE is yet another ſyſtem concerning perception, of which I ſhall give ſome account, becauſe of the fame of its author. It is the invention of the famous German Philoſopher LEIBNITZ, who, while he lived, held the firſt rank among the Germans in all parts of philoſophy, as well as in mathematics, in juriſprudence, in the knowledge of antiquities, and in every branch, both of ſcience and of literature. He was highly reſpected by emperors, and by many kings and princes, who beſtowed upon him ſingular marks of their eſteem. He was a particular favourite of our Queen CAROLINE, conſort of GEORGE II. with whom he continued his cor-

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respondence by letters after she came to the Crown of Britain, till his death.

The famous controversy between him and the British Mathematicians, whether he or Sir ISAAC NEWTON was the inventor of that noble improvement in mathematics, called by NEWTON *the method of fluxions*, and by LEIBNITZ *the differential method*, engaged the attention of the Mathematicians in Europe for several years. He had likewise a controversy with the learned and judicious Dr. SAMUEL CLARKE, about several points of the Newtonian philosophy which he disapproved. The papers which gave occasion to this controversy with all the replies and rejoinders, had the honour to be transmitted from the one party to the other through the hands of Queen CAROLINE, and were afterwards published.

His authority, in all matters of philosophy, is still so great in most parts of Germany, that they are considered as bold spirits, and a kind of heretics, who dissent from him in any thing. CAROLUS WOLFIUS, the most voluminous writer in philosophy of this age, is considered as the great interpreter and advocate of the Leibnitzian system, and reveres as an oracle whatever has dropped from the pen of LEIBNITZ. This author proposed two great works upon the mind. The first, which I have seen, he published with the title of *Psychologia empirica, seu experimentalis*. The other was to have the title of *Psychologia rationalis*, and to it he refers for his explication of the theory of LEIBNITZ with regard to the mind. But whether it was published I have not learned.

I must

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I muſt therefore take the ſhort account I am to give of this ſyſtem from the writings of LEIBNITZ himſelf, without the light which his interpreter WOLFIUS may have thrown upon it.

LEIBNITZ conceived the whole univerſe, bodies as well as minds, to be made up of monads, that is, ſimple ſubſtances, each of which is, by the Creator in the beginning of its exiſtence, endowed with certain active and perceptive powers. A monad, therefore, is an active ſubſtance, ſimple, without parts or figure, which has within itſelf the power to produce all the changes it undergoes from the beginning of its exiſtence to eternity. The changes which the monad undergoes, of what kind ſoever, though they may ſeem to us the effect of cauſes operating from without, yet they are only the gradual and ſucceſſive evolutions of its own internal powers, which would have produced all the ſame changes and motions, although there had been no other being in the univerſe.

Every human ſoul is a monad joined to an organiſed body, which organiſed body conſiſts of an infinite number of monads, each having ſome degree of active and of perceptive power in itſelf. But the whole machine of the body has a relation to that monad which we call the ſoul, which is, as it were, the center of the whole.

As the univerſe is completely filled with monads, without any chaſm or void, and thereby every body acts upon every other body, according to its vicinity or diſtance, and is mutually reacted upon by every other body, it follows, ſays LEIBNITZ, that every monad

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nad is a kind of living mirror, which reflects the whole univerſe, according to its point of view, and repreſents the whole more or leſs diſtinctly.

I cannot undertake to reconcile this part of the ſyſtem with what was before mentioned, to wit, that every change in a monad is the evolution of its own original powers, and would have happened though no other ſubſtance had been created. But to proceed.

There are different orders of monads, ſome higher, and others lower. The higher orders he calls dominant; ſuch is the human ſoul. The monads that compoſe the organiſed bodies of men, animals and plants, are of a lower order, and ſubſervient to the dominant monads. But every monad, of whatever order, is a complete ſubſtance in itſelf, indiviſible, having no parts, indeſtructible, becauſe, having no parts, it cannot periſh by any kind of decompoſition; it can only periſh by annihilation, and we have no reaſon to believe that God will ever annihilate any of the beings which he has made.

The monads of a lower order may, by a regular evolution of their powers, riſe to a higher order. They may ſucceſſively be joined to organiſed bodies, of various forms and different degrees of perception; but they never die, nor ceaſe to be in ſome degree active and percipient.

This Philoſopher makes a diſtinction between perception and what he calls *apperception*. The firſt is common to all monads, the laſt proper to the higher orders, among which are human ſouls.

By apperception he underſtands that degree of perception which reflects, as it were, upon itſelf;

itſelf; by which we are conſcious of our own exiſtence, and conſcious of our perceptions; by which we can reflect upon the operations of our own minds, and can comprehend abſtract truths. The mind, in many operations, he thinks, particularly in ſleep, and in many actions common to us with the brutes, has not this apperception, although it is ſtill filled with a multitude of obſcure and indiſtinct perceptions, of which we are not conſcious. CHAP. XV.

He conceives that our bodies and minds are united in ſuch a manner, that neither has any phyſical influence upon the other. Each performs all its operations by its own internal ſprings and powers; yet the operations of one correſpond exactly with thoſe of the other, by a pre-eſtabliſhed harmony; juſt as one clock may be ſo adjuſted as to keep time with another, although each has its own moving power, and neither receives any part of its motion from the other.

So that according to this ſyſtem all our perceptions of external objects would be the ſame, though external things had never exiſted; our perception of them would continue, although, by the power of God, they ſhould this moment be annihilated: We do not perceive external things becauſe they exiſt, but becauſe the ſoul was originally ſo conſtituted as to produce in itſelf all its ſucceſſive changes, and all its ſucceſſive perceptions, independently of the external objects.

Every perception or apperception, every operation, in a word, of the ſoul, is a neceſſary conſequence of the ſtate of it immediately preceding that operation; and this ſtate is the neceſſary conſequence of the ſtate preceding it; and

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and ſo backwards, until you come to its firſt formation and conſtitution, which produces ſucceſſively, and by neceſſary conſequence, all its ſucceſſive ſtates to the end of its exiſtence: So that in this reſpect the ſoul, and every monad, may be compared to a watch wound up, which having the ſpring of its motion in itſelf, by the gradual evolution of its own ſpring, produces all the ſucceſſive motions we obſerve in it.

In this account of LEIBNITZ ſyſtem concerning monads, and the pre-eſtabliſhed harmony, I have kept as nearly as I could to his own expreſſions, in his *new ſyſtem of the nature and communication of ſubſtances, and of the union of ſoul and body;* and in the ſeveral illuſtrations of that new ſyſtem which he afterwards publiſhed; and in his *principles of nature and grace founded in reaſon.* I ſhall now make a few remarks upon this ſyſtem.

1. To paſs over the irreſiſtible neceſſity of all human actions, which makes a part of this ſyſtem, that will be conſidered in another place, I obſerve firſt, that the diſtinction made between perception and apperception is obſcure and unphiloſophical: As far as we can diſcover, every operation of our mind is attended with conſciouſneſs, and particularly that which we call the perception of external objects; and to ſpeak of a perception of which we are not conſcious, is to ſpeak without any meaning.

As conſciouſneſs is the only power by which we diſcern the operations of our own minds, or can form any notion of them, an operation of mind of which we are not conſcious, is, we know not what; and to call ſuch an operation by

by the name of perception, is an abuſe of lan- CHAP. XV.
guage. No man can perceive an object, without being conſcious that he perceives it. No man can think, without being conſcious that he thinks. What men are not conſcious of, cannot therefore, without impropriety, be called either perception or thought of any kind. And if we will ſuppoſe operations of mind, of which we are not conſcious, and give a name to ſuch creatures of our imagination, that name muſt ſignify what we know nothing about.

2. To ſuppoſe bodies organiſed or unorganiſed, to be made up of indiviſible monads which have no parts, is contrary to all that we know of body. It is eſſential to a body to have parts; and every part of a body, is a body, and has parts alſo. No number of parts, without extenſion or figure, not even an infinite number, if we may uſe that expreſſion, can, by being put together, make a whole that has extenſion and figure, which all bodies have.

3. It is contrary to all that we know of bodies, to aſcribe to the monads, of which they are ſuppoſed to be compounded, perception and active force. If a Philoſopher thinks proper to ſay, that a clod of earth both perceives and has active force, let him bring his proofs. But he ought not to expect, that men who have underſtanding, will ſo far give it up as to receive without proof whatever his imagination may ſuggeſt.

4. This ſyſtem overturns all authority of our ſenſes, and leaves not the leaſt ground to believe the exiſtence of the objects of ſenſe, or the exiſtence of any thing which depends upon

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upon the authority of our ſenſes; for our perception of objects, according to this ſyſtem, has no dependence upon any thing external, and would be the ſame as it is ſuppoſing external objects had never exiſted, or that they were from this moment annihilated.

It is remarkable that LEIBNITZ's ſyſtem, that of MALEBRANCHE, and the common ſyſtem of ideas, or images of external objects in the mind, do all agree in overturning all the authority of our ſenſes; and this one thing, as long as men retain their ſenſes, will always make all theſe ſyſtems truly ridiculous.

5. The laſt obſervation I ſhall make upon this ſyſtem, which indeed is equally applicable to all the ſyſtems of perception I have mentioned, is, that it is all hypotheſis, made up of conjectures and ſuppoſitions, without proof. The Peripatetics ſuppoſed ſenſible *ſpecies* to be ſent forth by the objects of ſenſe. The moderns ſuppoſe ideas in the brain, or in the mind. MALEBRANCHE ſuppoſed, that we perceive the ideas of the Divine Mind. LEIBNITZ ſuppoſed monads and a pre-eſtabliſhed harmony; and theſe monads being creatures of his own making, he is at liberty to give them what properties and powers his fancy may ſuggeſt. In like manner, the Indian Philoſopher ſuppoſed that the earth is ſupported by a huge elephant, and that the elephant ſtands on the back of a huge tortoiſe.

Such ſuppoſitions, while there is no proof of them offered, are nothing but the fictions of human fancy; and we ought no more to believe them, than we believe HOMER's fictions of APOLLO's ſilver bow, or MINERVA's ſhield, or VENUS's girdle. Such fictions in poetry

poetry are agreeable to the rules of the art: They are intended to pleaſe, not to convince. But the Philoſophers would have us to believe their fictions, though the account they give of the phænomena of nature has commonly no more probability than the account that HOMER gives of the plague in the Grecian camp, from APOLLO taking his ſtation on a neighbouring mountain, and from his ſilver bow, letting fly his ſwift arrows into the camp.

Men then only begin to have a true taſte in philoſophy, when they have learned to hold hypotheſes in juſt contempt; and to conſider them as the reveries of ſpeculative men, which will never have any ſimilitude to the works of God.

The Supreme Being has given us ſome intelligence of his works, by what our ſenſes inform us of external things, and by what our conſciouſneſs and reflection inform us concerning the operations of our own minds. Whatever can be inferred from theſe common informations, by juſt and ſound reaſoning, is true and legitimate philoſophy: But what we add to this from conjecture is all ſpurious and illegitimate.

After this long account of the theories advanced by Philoſophers, to account for our perception of external objects, I hope it will appear, that neither ARISTOTLE's theory of ſenſible ſpecies, nor MALEBRANCHE's, of our ſeeing things in God, nor the common theory of our perceiving ideas in our own minds, nor LEIBNITZ's theory of monads, and a pre-eſtabliſhed harmony, give any ſatisfying account of this power of the mind, or make it more intelligible than it is without their aid. They

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are conjectures, and if they were true, would ſolve no difficulty, but raiſe many new ones. It is therefore more agreeable to good ſenſe, and to ſound philoſophy, to reſt ſatisfied with what our conſciouſneſs and attentive reflection diſcover to us of the nature of perception, than by inventing hypotheſes, to attempt to explain things which are above the reach of human underſtanding. I believe no man is able to explain how we perceive external objects, any more than how we are conſcious of thoſe that are internal. Perception, conſciouſneſs, memory, and imagination, are all original and ſimple powers of the mind, and parts of its conſtitution. For this reaſon, though I have endeavoured to ſhow, that the theories of Philoſophers on this ſubject are ill grounded and inſufficient, I do not attempt to ſubſtitute any other theory in their place.

Every man feels that perception gives him an invincible belief of the exiſtence of that which he perceives; and that this belief is not the effect of reaſoning, but the immediate conſequence of perception. When Philoſophers have wearied themſelves and their readers with their ſpeculations upon this ſubject, they can neither ſtrengthen this belief, nor weaken it; nor can they ſhow how it is produced. It puts the Philoſopher and the peaſant upon a level; and neither of them can give any other reaſon for believing his ſenſes, than that he finds it impoſſible for him to do otherwiſe.

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Of Senſation.

HAVING finiſhed what I intend, with regard to that act of mind which we call the perception of an external object, I proceed to conſider another, which, by our conſtitution, is conjoined with perception, and not with perception only, but with many other acts of our minds; and that is ſenſation. To prevent repetition, I muſt refer the reader to the explication of this word given in Eſſay I. chap. 1.

Almoſt all our perceptions have correſponding ſenſations which conſtantly accompany them, and, on that account, are very apt to be confounded with them. Neither ought we to expect, that the ſenſation, and its correſponding perception, ſhould be diſtinguiſhed in common language, becauſe the purpoſes of common life do not require it. Language is made to ſerve the purpoſes of ordinary converſation; and we have no reaſon to expect that it ſhould make diſtinctions that are not of common uſe. Hence it happens, that a quality perceived, and the ſenſation correſponding to that perception, often go under the ſame name.

This makes the names of moſt of our ſenſations ambiguous, and this ambiguity hath very much perplexed Philoſophers. It will be neceſſary to give ſome inſtances, to illuſtrate the diſtinction between our ſenſations and the objects of perception.

When I ſmell a roſe, there is in this operation both ſenſation and perception. The agree-

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able odour I feel, conſidered by itſelf, without relation to any external object, is merely a ſenſation. It affects the mind in a certain way; and this affection of the mind may be conceived without a thought of the roſe, or any other object. This ſenſation can be nothing elſe than it is felt to be. Its very eſſence conſiſts in being felt; and when it is not felt, it is not. There is no difference between the ſenſation and the feeling of it; they are one and the ſame thing. It is for this reaſon, that we before obſerved, that, in ſenſation, there is no object diſtinct from that act of the mind by which it is felt; and this holds true with regard to all ſenſations.

Let us next attend to the perception which we have in ſmelling a roſe. Perception has always an external object; and the object of my perception, in this caſe, is that quality in the roſe which I diſcern by the ſenſe of ſmell. Obſerving that the agreeable ſenſation is raiſed when the roſe is near, and ceaſes when it is removed, I am led, by my nature, to conclude ſome quality to be in the roſe, which is the cauſe of this ſenſation. This quality in the roſe is the object perceived; and that act of my mind, by which I have the conviction and belief of this quality, is what in this caſe I call perception.

But it is here to be obſerved, that the ſenſation I feel, and the quality in the roſe which I perceive, are both called by the ſame name. The ſmell of a roſe is the name given to both: So that this name hath two meanings; and the diſtinguiſhing its different meanings removes all perplexity, and enables us to give clear and diſtinct anſwers to queſtions, about which Philoſophers have held much diſpute.

Thus,

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Thus, if it is asked, Whether the smell be in the rose, or in the mind that feels it? The answer is obvious: That there are two different things signified by the smell of a rose; one of which is in the mind, and can be in nothing but in a sentient being; the other is truly and properly in the rose. The sensation which I feel is in my mind. The mind is the sentient being; and as the rose is insentient, there can be no sensation, nor any thing resembling sensation in it. But this sensation in my mind is occasioned by a certain quality in the rose, which is called by the same name with the sensation, not on account of any similitude, but because of their constant concomitancy.

All the names we have for smells, tastes, sounds, and for the various degrees of heat and cold, have a like ambiguity; and what has been said of the smell of a rose may be applied to them. They signify both a sensation, and a quality perceived by means of that sensation. The first is the sign, the last the thing signified. As both are conjoined by nature, and as the purposes of common life do not require them to be disjoined in our thoughts, they are both expressed by the same name: And this ambiguity is to be found in all languages, because the reason of it extends to all.

The same ambiguity is found in the names of such diseases as are indicated by a particular painful sensation: Such as the tooth-ach, the head-ach. The tooth-ach signifies a painful sensation, which can only be in a sentient being; but it signifies also a disorder in the body, which has no similitude to a sensation, but is naturally connected with it.

Pressing

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Preſſing my hand with force againſt the table, I feel pain, and I feel the table to be hard. The pain is a ſenſation of the mind, and there is nothing that reſembles it in the table. The hardneſs is in the table, nor is there any thing reſembling it in the mind. Feeling is applied to both; but in a different ſenſe; being a word common to the act of ſenſation, and to that of perceiving by the ſenſe of touch.

I touch the table gently with my hand, and I feel it to be ſmooth, hard, and cold. Theſe are qualities of the table perceived by touch; but I perceive them by means of a ſenſation which indicates them. This ſenſation not being painful, I commonly give no attention to it. It carries my thought immediately to the thing ſignified by it, and is itſelf forgot, as if it had never been. But by repeating it, and turning my attention to it, and abſtracting my thought from the thing ſignified by it, I find it to be merely a ſenſation, and that it has no ſimilitude to the hardneſs, ſmoothneſs, or coldneſs of the table which are ſignified by it.

It is indeed difficult, at firſt, to disjoin things in our attention which have always been conjoined, and to make that an object of reflection which never was ſo before; but ſome pains and practice will overcome this difficulty in thoſe who have got the habit of reflecting on the operations of their own minds.

Although the preſent ſubject leads us only to conſider the ſenſations which we have by means of our external ſenſes, yet it will ſerve to illuſtrate what has been ſaid, and I apprehend is of importance in itſelf to obſerve, that many operations of mind, to which we give one name, and which we always conſider as one

one thing, are complex in their nature, and made up of ſeveral more ſimple ingredients; and of theſe ingredients ſenſation very often makes one. Of this we ſhall give ſome inſtances.

The appetite of hunger includes an uneaſy ſenſation, and a deſire of food. Senſation and deſire are different acts of mind. The laſt, from its nature, muſt have an object; the firſt has no object. Theſe two ingredients may always be ſeparated in thought; perhaps they ſometimes are, in reality; but hunger includes both.

Benevolence towards our fellow-creatures includes an agreeable feeling; but it includes alſo a deſire of the happineſs of others. The ancients commonly called it deſire: Many moderns chuſe rather to call it a feeling. Both are right; and they only err who exclude either of the ingredients. Whether theſe two ingredients are neceſſarily connected, is perhaps difficult for us to determine, there being many neceſſary connections which we do not perceive to be neceſſary; but we can disjoin them in thought. They are different acts of the mind.

An uneaſy feeling, and a deſire, are in like manner the ingredients of malevolent affections; ſuch as malice, envy, revenge. The paſſion of fear includes an uneaſy ſenſation or feeling, and an opinion of danger; and hope is made up of the contrary ingredients. When we hear of a heroic action, the ſentiment which it raiſes in our mind is made up of various ingredients. There is in it an agreeable feeling, a benevolent affection to the perſon, and a judgment or opinion of his merit.

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If we thus analyſe the various operations of our minds, we ſhall find, that many of them which we conſider as perfectly ſimple, becauſe we have been accuſtomed to call them by one name, are compounded of more ſimple ingredients; and that ſenſation, or feeling which is only a more refined kind of ſenſation, makes one ingredient, not only in the perception of external objects, but in moſt operations of the mind.

A ſmall degree of reflection may ſatisfy us that the number and variety of our ſenſations and feelings is prodigious: For, to omit all thoſe which accompany our appetites, paſſions, and affections, our moral ſentiments, and ſentiments of taſte, even our external ſenſes furniſh a great variety of ſenſations differing in kind, and almoſt in every kind an endleſs variety of degrees. Every variety we diſcern, with regard to taſte, ſmell, ſound, colour, heat and cold, and in the tangible qualities of bodies, is indicated by a ſenſation correſponding to it.

The moſt general and the moſt important diviſion of our ſenſations and feelings, is into the agreeable, the diſagreeable, and the indifferent. Every thing we call pleaſure, happineſs, or enjoyment, on the one hand; and on the other, every thing we call miſery, pain, or uneaſineſs, is ſenſation or feeling: For no man can for the preſent be more happy, or more miſerable than he feels himſelf to be. He cannot be deceived with regard to the enjoyment or ſuffering of the preſent moment.

But I apprehend, that beſides the ſenſations that are either agreeable or diſagreeable, there is ſtill a greater number that are indifferent.

To

To these we give so little attention that they have no name, and are immediately forgot as if they had never been; and it requires attention to the operations of our minds to be convinced of their existence. CHAP. XVI.

For this end we may observe, that to a good ear every human voice is distinguishable from all others. Some voices are pleasant, some disagreeable; but the far greater part can neither be said to be one or the other. The same thing may be said of other sounds, and no less of tastes, smells, and colours; and if we consider that our senses are in continual exercise while we are awake, that some sensation attends every object they present to us, and that familiar objects seldom raise any emotion pleasant or painful; we shall see reason, besides the agreeable and disagreeable, to admit a third class of sensations that may be called indifferent.

The sensations that are indifferent, are far from being useless. They serve as signs to distinguish things that differ; and the information we have concerning things external, comes by their means. Thus, if a man had no ear to receive pleasure from the harmony or melody of sounds, he would still find the sense of hearing of great utility: Though sounds give him neither pleasure nor pain of themselves, they would give him much useful information; and the like may be said of the sensations we have by all the other senses.

As to the sensations and feelings that are agreeable or disagreeable, they differ much not only in degree, but in kind and in dignity. Some belong to the animal part of our nature, and are common to us with the brutes:

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Others belong to the rational and moral part. The firſt are more properly called *ſenſations*, the laſt *feelings*. The French word *ſentiment* is common to both.

The intention of Nature in them is for the moſt part obvious, and well deſerving our notice. It has been beautifully illuſtrated by a very elegant French writer, in his *Theorie des ſentiments agreables*.

The author of Nature, in the diſtribution of agreeable and painful feelings, hath wiſely and benevolently conſulted the good of the human ſpecies, and hath even ſhewn us, by the ſame means, what tenor of conduct we ought to hold. For, *firſt*, The painful ſenſations of the animal kind are admonitions to avoid what would hurt us; and the agreeable ſenſations of this kind, invite as to thoſe actions that are neceſſary to the preſervation of the individual, or of the kind. *Secondly*, By the ſame means nature invites us to moderate bodily exerciſe, and admoniſhes us to avoid idleneſs and inactivity on the one hand, and exceſſive labour and fatigue on the other. *Thirdly*, The moderate exerciſe of all our rational powers gives pleaſure. *Fourthly*, Every ſpecies of beauty is beheld with pleaſure, and every ſpecies of deformity with diſguſt; and we ſhall find all that we call beautiful, to be ſomething eſtimable or uſeful in itſelf, or a ſign of ſomething that is eſtimable or uſeful. *Fifthly*, The benevolent affections are all accompanied with an agreeable feeling, the malevolent with the contrary. And, *ſixthly*, The higheſt, the nobleſt, and moſt durable pleaſure, is that of doing well, and acting the part that becomes us; and the moſt bitter and painful

painful ſentiment, the anguiſh and remorſe of a guilty conſcience. Theſe obſervations, with regard to the œconomy of Nature in the diſtribution of our painful and agreeable ſenſations and feelings, are illuſtrated by the author laſt mentioned, ſo elegantly and judiciouſly, that I ſhall not attempt to ſay any thing upon them after him. CHAP. XVI.

I ſhall conclude this chapter by obſerving, that as the confounding our ſenſations with that perception of external objects, which is conſtantly conjoined with them, has been the occaſion of moſt of the errors and falſe theories of Philoſophers with regard to the ſenſes; ſo the diſtinguiſhing theſe operations ſeems to me to be the key that leads to a right underſtanding of both.

Senſation, taken by itſelf, implies neither the conception nor belief of any external object. It ſuppoſes a ſentient being, and a certain manner in which that being is affected, but it ſuppoſes no more. Perception implies an immediate conviction and belief of ſomething external; ſomething different both from the mind that perceives, and from the act of perception. Things ſo different in their nature ought to be diſtinguiſhed; but by our conſtitution they are always united. Every different perception is conjoined with a ſenſation that is proper to it. The one is the ſign, the other the thing ſignified. They coaleſce in our imagination. They are ſignified by one name, and are conſidered as one ſimple operation. The purpoſes of life do not require them to be diſtinguiſhed.

It is the Philoſopher alone who has occaſion to diſtinguiſh them, when he would analyſe the

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the operation compounded of them. But he has no ſuſpicion that there is any compoſition in it; and to diſcover this requires a degree of reflection which has been too little practiſed even by Philoſophers.

In the old philoſophy, ſenſation and perception were perfectly confounded. The ſenſible ſpecies coming from the object, and impreſſed upon the mind, was the whole; and you might call it ſenſation or perception as you pleaſed.

Des Cartes and Locke, attending more to the operations of their own minds, ſay, That the ſenſations by which we have notice of ſecondary qualities, have no reſemblance to any thing that pertains to body; but they did not ſee that this might with equal juſtice be applied to the primary qualities. Mr. Locke maintains, that the ſenſations we have from primary qualities are reſemblances of thoſe qualities. This ſhews how groſsly the moſt ingenious men may err with regard to the operations of their minds. It muſt indeed be acknowledged, that it is much eaſier to have a diſtinct notion of the ſenſations that belong to ſecondary, than of thoſe that belong to the primary qualities. The reaſon of this will appear in the next chapter.

But had Mr. Locke attended with ſufficient accuracy to the ſenſations which he was every day and every hour receiving from primary qualities, he would have ſeen that they can as little reſemble any quality of an inanimated being, as pain can reſemble a cube or a circle.

What had eſcaped this ingenious Philoſopher, was clearly diſcerned by Biſhop Berkeley. He had a juſt notion of ſenſations, and ſaw that it was impoſſible that any thing in an inſentient

insentient being could resemble them; a thing so evident in itself, that it seems wonderful that it should have been so long unknown.

But let us attend to the consequence of this discovery. Philosophers, as well as the vulgar, had been accustomed to comprehend both sensation and perception under one name, and to consider them as one uncompounded operation. Philosophers, even more than the vulgar, gave the name of sensation to the whole operation of the senses; and all the notions we have of material things were called ideas of sensation. This led Bishop Berkeley to take one ingredient of a complex operation for the whole; and having clearly discovered the nature of sensation, taking it for granted that all that the senses present to the mind is sensation, which can have no resemblance to any thing material, he concluded that there is no material world.

If the senses furnished us with no materials of thought but sensations, his conclusion must be just, for no sensation can give us the conception of material things, far less any argument to prove their existence. But if it is true that by our senses we have not only a variety of sensations, but likewise a conception, and an immediate natural conviction of external objects, he reasons from a false supposition, and his arguments fall to the ground.

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Of the Objects of Perception; and first, Of primary and secondary Qualities.

THE objects of perception are the various qualities of bodies. Intending to treat of these only in general, and chiefly with a view to explain the notions which our senses give us of them, I begin with the distinction between primary and secondary qualities. These were distinguished very early. The Peripatetic system confounded them, and left no difference. The dictinction was again revived by DES CARTES and LOCKE, and a second time abolished by BERKELEY and HUME. If the real foundation of this distinction can be pointed out, it will enable us to account for the various revolutions in the sentiments of Philosophers concerning it.

Every one knows that extension, divisibility, figure, motion, solidity, hardness, softness, and fluidity, were by Mr. LOCKE called *primary qualities of body;* and that sound, colour, taste, smell, and heat or cold, were called *secondary qualities.* Is there a just foundation for this distinction? Is there any thing common to the primary which belongs not to the secondary? And what is it?

I answer, That there appears to me to be a real foundation for the distinction; and it is this: That our senses give us a direct and a distinct notion of the primary qualities, and inform us what they are in themselves: But of the secondary qualities, our senses give us only a relative and obscure notion. They inform us only, that they are qualities that affect us in a certain

a certain manner, that is, produce in us a certain ſenſation; but as to what they are in themſelves, our ſenſes leave us in the dark.

Every man capable of reflection may eaſily ſatisfy himſelf, that he has a perfectly clear and diſtinct notion of extenſion, diviſibility, figure, and motion. The ſolidity of a body means no more, but that it excludes other bodies from occupying the ſame place at the ſame time. Hardneſs, ſoftneſs, and fluidity, are different degrees of coheſion in the parts of a body. It is fluid, when it has no ſenſible coheſion; ſoft when the coheſion is weak; and hard when it is ſtrong: Of the cauſe of this coheſion we are ignorant, but the thing itſelf we underſtand perfectly, being immediately informed of it by the ſenſe of touch. It is evident, therefore, that of the primary qualities we have a clear and diſtinct notion; we know what they are, though we may be ignorant of their cauſes.

I obſerved farther, that the notion we have of primary qualities is direct, and not relative only. A relative notion of a thing, is, ſtrictly ſpeaking, no notion of the thing at all, but only of ſome relation which it bears to ſomething elſe.

Thus gravity ſometimes ſignifies the tendency of bodies towards the earth; ſometimes it ſignifies the cauſe of that tendency: When it means the firſt, I have a direct and diſtinct notion of gravity; I ſee it, and feel it, and know perfectly what it is; but this tendency muſt have a cauſe: We give the ſame name to the cauſe; and that cauſe has been an object of thought and of ſpeculation. Now what notion have we of this cauſe when we think and

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and reaſon about it? It is evident, we think of it as an unknown cauſe, of a known effect. This is a relative notion, and it muſt be obſcure, becauſe it gives us no conception of what the thing is, but of what relation it bears to ſomething elſe.. Every relation which a thing unknown bears to ſomething that is known, may give a relative notion of it; and there are many objects of thought, and of diſcourſe, of which our faculties can give no better than a relative notion.

Having premiſed theſe things to explain what is meant by a relative notion, it is evident, that our notion of primary qualities is not of this kind; we know what they are, and not barely what relation they bear to ſomething elſe.

It is otherwiſe with ſecondary qualities. If you aſk me, what is that quality or modification in a roſe which I call its ſmell, I am at a loſs to anſwer directly. Upon reflection I find, that I have a diſtinct notion of the ſenſation which it produces in my mind. But there can be nothing like to this ſenſation in the roſe, becauſe it is inſentient. The quality in the roſe is ſomething which occaſions the ſenſation in me; but what that ſomething is, I know not. My ſenſes give me no information upon this point. The only notion therefore my ſenſes give is this, That ſmell in the roſe is an unknown quality or modification, which is the cauſe or occaſion of a ſenſation which I know well. The relation which this unknown quality bears to the ſenſation with which nature hath connected it, is all I learn from the ſenſe of ſmelling; but this is evidently a relative notion. The ſame reaſoning will apply to every ſecondary quality.

Thus

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Thus I think it appears, that there is a real foundation for the diſtinction of primary from ſecondary qualities; and that they are diſtinguiſhed by this, that of the primary we have by our ſenſes a direct and diſtinct notion; but of the ſecondary only a relative notion, which muſt, becauſe it is only relative, be obſcure; they are conceived only as the unknown cauſes or occaſions of certain ſenſations with which we are well acquainted.

The account I have given of this diſtinction is founded upon no hypotheſis. Whether our notions of primary qualities are direct and diſtinct, thoſe of the ſecondary relative and obſcure, is a matter of fact, of which every man may have certain knowledge by attentive reflection upon them. To this reflection I appeal, as the proper teſt of what has been advanced, and proceed to make ſome reflections on this ſubject.

1. The primary qualities are neither ſenſations, nor are they reſemblances of ſenſations.

This appears to me ſelf-evident. I have a clear and diſtinct notion of each of the primary qualities. I have a clear and diſtinct notion of ſenſation. I can compare the one with the other; and when I do ſo, I am not able to diſcern a reſembling feature. Senſation is the act, or the feeling, (I diſpute not which) of a ſentient being. Figure, diviſibility, ſolidity, are neither acts nor feelings. Senſation ſuppoſes a ſentient being as its ſubject; for a ſenſation that is not felt by ſome ſentient being, is an abſurdity. Figure and diviſibility ſuppoſes a ſubject that is figured and diviſible, but not a ſubject that is ſentient.

2. We

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2. We have no reaſon to think that any of the ſecondary qualities reſemble any ſenſation. The abſurdity of this notion has been clearly ſhown by DES CARTES, LOCKE, and many modern Philoſophers. It was a tenet of the ancient philoſophy, and is ſtill by many imputed to the vulgar, but only as a vulgar error. It is too evident to need proof, that the vibrations of a ſounding body do not reſemble the ſenſation of ſound, nor the effluvia of an odorous body the ſenſation of ſmell.

3. The diſtinctneſs of our notions of primary qualities prevents all queſtions and diſputes about their nature. There are no different opinions about the nature of extenſion, figure, or motion, or the nature of any primary quality. Their nature is manifeſt to our ſenſes, and cannot be unknown to any man, or miſtaken by him, though their cauſes may admit of diſpute.

The primary qualities are the object of the mathematical ſciences; and the diſtinctneſs of our notions of them enables us to reaſon demonſtratively about them to a great extent. Their various modifications are preciſely defined in the imagination, and thereby capable of being compared, and their relations determined with preciſion and certainty.

It is not ſo with ſecondary qualities. Their nature not being manifeſt to the ſenſe, may be a ſubject of diſpute. Our feeling informs us that the fire is hot; but it does not inform us what that heat of the fire is. But does it not appear a contradiction, to ſay we know that the fire is hot, but we know not what that heat is? I anſwer, There is the ſame appearance of contradiction in many things, that

that muſt be granted. We know that wine has an inebriating quality; but we know not what that quality is. It is true, indeed, that if we had not ſome notion of what is meant by the heat of fire, and by an inebriating quality, we could affirm nothing of either with underſtanding. We have a notion of both; but it is only a relative notion. We know that they are the cauſes of certain known effects. CHAP. XVII.

4. The nature of ſecondary qualities is a proper ſubject of philoſophical diſquiſition; and in this philoſophy has made ſome progreſs. It has been diſcovered, that the ſenſation of ſmell is occaſioned by the effluvia of bodies; that of ſound by their vibration. The diſpoſition of bodies to reflect a particular kind of light occaſions the ſenſation of colour. Very curious diſcoveries have been made of the nature of heat, and an ample field of diſcovery in theſe ſubjects remains.

5. We may ſee why the ſenſations belonging to ſecondary qualities are an object of our attention, while thoſe which belong to the primary are not.

The firſt are not only ſigns of the object perceived, but they bear a capital part in the notion we form of it. We conceive it only as that which occaſions ſuch a ſenſation, and therefore cannot reflect upon it without thinking of the ſenſation which it occaſions: We have no other mark whereby to diſtinguiſh it. The thought of a ſecondary quality, therefore, always carries us back to the ſenſation which it produces. We give the ſame name to both, and are apt to confound them together.

But having a clear and diſtinct conception of primary qualities, we have no need when we

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we think of them to recal their ſenſations. When a primary quality is perceived, the ſenſation immediately leads our thought to the quality ſignified by it, and is itſelf forgot. We have no occaſion afterwards to reflect upon it; and ſo we come to be as little acquainted with it, as if we had never felt it. This is the caſe with the ſenſations of all primary qualities, when they are not ſo painful or pleaſant as to draw our attention.

When a man moves his hand rudely againſt a pointed hard body, he feels pain, and may eaſily be perſuaded that this pain is a ſenſation, and that there is nothing reſembling it in the hard body; at the ſame time he perceives the body to be hard and pointed, and he knows that theſe qualities belong to the body only. In this caſe, it is eaſy to diſtinguiſh what he feels from what he perceives.

Let him again touch the pointed body gently, ſo as to give him no pain; and now you can hardly perſuade him that he feels any thing but the figure and hardneſs of the body; ſo difficult it is to attend to the ſenſations belonging to primary qualities, when they are neither pleaſant nor painful. They carry the thought to the external object, and immediately diſappear and are forgot. Nature intended them only as ſigns; and when they have ſerved that purpoſe they vaniſh.

We are now to conſider the opinions both of the vulgar, and of Philoſophers upon this ſubject. As to the former, it is not to be expected that they ſhould make diſtinctions which have no connection with the common affairs of life; they do not therefore diſtinguiſh the primary from the ſecondary qualities, but ſpeak

ſpeak of both as being equally qualities of the external object. Of the primary qualities they have a diſtinct notion, as they are immediately and diſtinctly perceived by the ſenſes; of the ſecondary, their notions, as I apprehend, are confuſed and indiſtinct, rather than erroneous. A ſecondary quality is the unknown cauſe or occaſion of a well known effect; and the ſame name is common to the cauſe and the effect. Now, to diſtinguiſh clearly the different ingredients of a complex notion, and, at the ſame time, the different meanings of an ambiguous word, is the work of a Philoſopher; and is not to be expected of the vulgar, when their occaſions do not require it.

I grant, therefore, that the notion which the vulgar have of ſecondary qualities, is indiſtinct and inaccurate. But there ſeems to be a contradiction between the vulgar and the Philoſopher upon this ſubject, and each charges the other with a groſs abſurdity. The vulgar ſay, That fire is hot, and ſnow cold, and ſugar ſweet; and that to deny this is a groſs abſurdity, and contradicts the teſtimony of our ſenſes. The Philoſopher ſays, That heat, and cold, and ſweetneſs, are nothing but ſenſations in our minds; and it is abſurd to conceive, that theſe ſenſations are in the fire, or in the ſnow, or in the ſugar.

I believe this contradiction between the vulgar and the Philoſopher is more apparent than real; and that it is owing to an abuſe of language on the part of the Philoſopher, and to indiſtinct notions on the part of the vulgar. The Philoſopher ſays, There is no heat in the fire, meaning, that the fire has not the ſenſation of heat. His meaning is juſt; and the vulgar

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vulgar will agree with him, as ſoon as they underſtand his meaning: But his language is improper; for there is really a quality in the fire, of which the proper name is heat; and the name of heat is given to this quality, both by Philoſophers and by the vulgar, much more frequently than to the ſenſation of heat. This ſpeech of the Philoſopher, therefore, is meant by him in one ſenſe; it is taken by the vulgar in another ſenſe. In the ſenſe in which they take it, it is indeed abſurd, and ſo they hold it to be. In the ſenſe in which he means it, it is true; and the vulgar, as ſoon as they are made to underſtand that ſenſe, will acknowledge it to be true. They know as well as the Philoſopher, that the fire does not feel heat; and this is all that he means by ſaying there is no heat in the fire.

In the opinions of Philoſophers about primary and ſecondary qualities, there have been, as was before obſerved, ſeveral revolutions: They were diſtinguiſhed long before the days of ARISTOTLE, by the ſect called Atomiſts; among whom DEMOCRITUS made a capital figure. In thoſe times, the name of *quality* was applied only to thoſe we call ſecondary qualities; the primary being conſidered as eſſential to matter, were not called qualities. That the atoms, which they held to be the firſt principles of things, were extended, ſolid, figured, and moveable, there was no doubt; but the queſtion was, whether they had ſmell, taſte, and colour? or, as it was commonly expreſſed, whether they had qualities? The Atomiſts maintained, that they had not; that the qualities were not in bodies, but were ſomething reſulting from the operation of bodies upon our ſenſes.

It

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It would ſeem, that when men began to ſpeculate upon this ſubject, the primary qualities appeared ſo clear and manifeſt, that they could entertain no doubt of their exiſtence wherever matter exiſted; but the ſecondary ſo obſcure, that they were at a loſs where to place them. They uſed this compariſon; as fire, which is neither in the flint nor in the ſteel, is produced by their colliſion, ſo thoſe qualities, though not in bodies, are produced by their impulſe upon our ſenſes.

This doctrine was oppoſed by ARISTOTLE. He believed taſte and colour to be ſubſtantial forms of bodies, and that their ſpecies, as well as thoſe of figure and motion, are received by the ſenſes.

In believing, that what we commonly call *taſte* and *colour*, is ſomething really inherent in body, and does not depend upon its being taſted and ſeen, he followed nature. But, in believing that our ſenſations of taſte and colour are the forms or ſpecies of thoſe qualities received by the ſenſes, he followed his own theory, which was an abſurd fiction. DES CARTES not only ſhowed the abſurdity of ſenſible ſpecies received by the ſenſes, but gave a more juſt and more intelligible account of ſecondary qualities than had been given before. Mr. LOCKE followed him, and beſtowed much pains upon this ſubject. He was the firſt, I think, that gave them the name of ſecondary qualities, which has been very generally adopted. He diſtinguiſhed the ſenſation from the quality in the body, which is the cauſe or occaſion of that ſenſation, and ſhowed that there neither is nor can be any ſimilitude between them.

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By this account, the ſenſes are acquitted of putting any fallacy upon us; the ſenſation is real, and no fallacy; the quality in the body, which is the cauſe or occaſion of this ſenſation, is likewiſe real, though the nature of it is not manifeſt to our ſenſes. If we impoſe upon ourſelves, by confounding the ſenſation with the quality that occaſions it, this is owing to raſh judgment, or weak underſtanding, but not to any falſe teſtimony of our ſenſes.

This account of ſecondary qualities I take to be very juſt; and, if Mr. Locke had ſtopped here, he would have left the matter very clear. But he thought it neceſſary to introduce the theory of ideas, to explain the diſtinction between primary and ſecondary qualities, and by that means, as I think, perplexed and darkened it.

When Philoſophers ſpeak about ideas, we are often at a loſs to know what they mean by them, and may be apt to ſuſpect that they are mere fictions, that have no exiſtence. They have told us, that, by the ideas which we have immediately from our ſenſes, they mean our ſenſations. Theſe, indeed, are real things, and not fictions. We may, by accurate attention to them, know perfectly their nature; and if Philoſophers would keep by this meaning of the word *idea*, when applied to the objects of ſenſe, they would at leaſt be more intelligible. Let us hear now how Mr. Locke explains the nature of thoſe ideas, when applied to primary and ſecondary qualities, Book 2. chap. 8. ſect. 7. 10th edition. "To diſcover the nature of our ideas the better, and "to diſcourſe of them intelligibly, it will be "convenient to diſtinguiſh them, as they are "ideas,

" ideas, or perceptions in our minds, and as " they are modifications of matter in the bo- " dies that cauſe ſuch perceptions in us, that ſo " we may not think (as perhaps uſually is " done), that they are exactly the images and " reſemblances of ſomething inherent in the " ſubject; moſt of thoſe of ſenſation being, in " the mind, no more the likeneſs of ſome- " thing exiſting without us, than the names " that ſtand for them are the likeneſs of our " ideas, which yet, upon hearing, they are " apt to excite in us."

This way of diſtinguiſhing a thing, *firſt*, as what it is; and, *ſecondly*, as what it is not, is, I apprehend, a very extraordinary way of diſcovering its nature: And if ideas are ideas or perceptions in our minds, and at the ſame time the modifications of matter in the bodies that cauſe ſuch perception in us, it will be no eaſy matter to diſcourſe of them intelligibly.

The diſcovery of the nature of ideas is carried on in the next ſection, in a manner no leſs extraordinary. " Whatſoever the mind " perceives in itſelf, or is the immediate ob- " ject of perception, thought, or underſtand- " ing, that I call *idea*; and the power to pro- " duce any idea in our mind, I call *quality* of " the ſubject wherein that power is. Thus a " ſnowball having the power to produce in us " the ideas of white, cold, and round, the " powers to produce thoſe ideas in us, as they " are in the ſnowball, I call *qualities*; and as " they are ſenſations, or perceptions in our " underſtandings, I call them *ideas;* which " ideas, if I ſpeak of them ſometimes as in " the things themſelves, I would be underſtood " to mean thoſe qualities in the objects which " produce them in us."

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These are the distinctions which Mr. Locke thought convenient, in order to discover the nature of our ideas of the qualities of matter the better, and to discourse of them intelligibly. I believe it will be difficult to find two other paragraphs in the Essay so unintelligible. Whether this is to be imputed to the intractable nature of ideas, or to an oscitancy of the author, with which he is very rarely chargeable, I leave the reader to judge. There are, indeed, several other passages in the same chapter, in which a like obscurity appears; but I do not chuse to dwell upon them. The conclusion drawn by him from the whole, is, that primary and secondary qualities are distinguished by this, that the ideas of the former are resemblances or copies of them; but the ideas of the other are not resemblances of them. Upon this doctrine, I beg leave to make two observations.

First, Taking it for granted, that, by the ideas of primary and secondary qualities, he means the sensations they excite in us, I observe that it appears strange, that a sensation should be the idea of a quality in body, to which it is acknowledged to bear no resemblance. If the sensation of sound be the idea of that vibration of the sounding body which occasions it, a surfeit may, for the same reason, be the idea of a feast.

A *second* observation is, That, when Mr. Locke affirms, that the ideas of primary qualities, that is, the sensations they raise in us, are resemblances of those qualities, he seems neither to have given due attention to those sensations, nor to the nature of sensation in general.

Let

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Let a man preſs his hand againſt a hard body, and let him attend to the ſenſation he feels, excluding from his thought every thing external, even the body that is the cauſe of his feeling. This abſtraction indeed is difficult, and ſeems to have been little, if at all, practiſed: But it is not impoſſible, and it is evidently the only way to underſtand the nature of the ſenſation. A due attention to this ſenſation will ſatisfy him, that it is no more like hardneſs in a body, than the ſenſation of ſound is like vibration in the ſounding body.

I know of no ideas but my conceptions; and my idea of hardneſs in a body, is the conception of ſuch a coheſion of its parts as requires great force to diſplace them. I have both the conception and belief of this quality in the body, at the ſame time that I have the ſenſation of pain, by preſſing my hand againſt it. The ſenſation and perception are cloſely conjoined by my conſtitution; but I am ſure they have no ſimilitude: I know no reaſon why the one ſhould be called the idea of the other, which does not lead us to call every natural effect the idea of its cauſe.

Neither did Mr. LOCKE give due attention to the nature of ſenſation in general, when he affirmed, that the ideas of primary qualities, that is, the ſenſation excited by them, are reſemblances of thoſe qualities.

That there can be nothing like ſenſation in an inſentient being, or like thought in an unthinking being, is ſelf-evident, and has been ſhown, to the conviction of all men that think, by Biſhop BERKELEY; yet this was unknown to Mr. LOCKE. It is an humbling conſideration, that, in ſubjects of this kind, ſelf-evident truths

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truths may be hid from the eyes of the moſt ingenious men. But we have, withal, this conſolation, that, when once diſcovered, they ſhine by their own light; and that light can no more be put out.

Upon the whole, Mr. LOCKE, in making ſecondary qualities to be powers in bodies to excite certain ſenſations in us, has given a juſt and diſtinct analyſis of what our ſenſes diſcover concerning them; but, in applying the theory of ideas to them, and to the primary qualities, he has been led to ſay things that darken the ſubject, and that will not bear examination.

Biſhop BERKELEY having adopted the ſentiments common to Philoſophers, concerning the ideas we have by our ſenſes, to wit, that they are all ſenſations, ſaw more clearly the neceſſary conſequence of this doctrine; which is, that there is no material world; no qualities primary or ſecondary; and, conſequently, no foundation for any diſtinction between them. He expoſed the abſurdity of a reſemblance between our ſenſations and any quality, primary or ſecondary, of a ſubſtance that is ſuppoſed to be inſentient. Indeed, if it is granted that the ſenſes have no other office but to furniſh us with ſenſations, it will be found impoſſible to make any diſtinction between primary and ſecondary qualities, or even to maintain the exiſtence of a material world.

From the account I have given of the various revolutions in the opinions of Philoſophers about primary and ſecondary qualities, I think it appears, that all the darkneſs and intricacy that thinking men have found in this ſubject, and the errors they have fallen into, have been owing to the difficulty of diſtinguiſhing clearly

ſenſation

ſenſation from perception; what we feel from what we perceive.

The external ſenſes have a double province; to make us feel, and to make us perceive. They furniſh us with a variety of ſenſations, ſome pleaſant, others painful, and others indifferent; at the ſame time they give us a conception, and an invincible belief of the exiſtence of external objects. This conception of external objects is the work of Nature. The belief of their exiſtence, which our ſenſes give, is the work of Nature; ſo likewiſe is the ſenſation that accompanies it. This conception and belief which Nature produces by means of the ſenſes, we call *perception*. The feeling which goes along with the perception, we call *ſenſation*. The perception and its correſponding ſenſation are produced at the ſame time. In our experience we never find them disjoined. Hence we are led to conſider them as one thing, to give them one name, and to confound their different attributes. It becomes very difficult to ſeparate them in thought, to attend to each by itſelf, and to attribute nothing to it which belongs to the other.

To do this requires a degree of attention to what paſſes in our own minds, and a talent of diſtinguiſhing things that differ, which is not to be expected in the vulgar, and is even rarely found in Philoſophers; ſo that the progreſs made in a juſt analyſis of the operations of our ſenſes has been very ſlow. The hypotheſis of ideas, ſo generally adopted, hath, as I apprehend, greatly retarded this progreſs, and we might hope for a quicker advance, if Philoſophers could ſo far humble themſelves as to believe, that in every branch of the philoſophy of Nature,

CHAP. XVII. Nature, the productions of human fancy and conjecture will be found to be droſs; and that the only pure metal that will endure the teſt, is what is diſcovered by patient obſervation, and chaſte induction.

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Of other Objects of Perception.

BESIDES primary and ſecondary qualities of bodies, there are many other immediate objects of perception. Without pretending to a complete enumeration, I think they moſtly fall under one or other of the following claſſes. 1*ſt*, Certain ſtates or conditions of our own bodies. 2*d*, Mechanical powers or forces. 3*d*, Chemical powers. 4*th*, Medical powers or virtues. 5*th*, Vegetable and animal powers.

That we perceive certain diſorders in our own bodies by means of uneaſy ſenſations, which Nature hath conjoined with them, will not be diſputed. Of this kind are toothach, headach, gout, and every diſtemper and hurt which we feel. The notions which our ſenſe gives of theſe, have a ſtrong analogy to our notions of ſecondary qualities. Both are ſimilarly compounded, and may be ſimilarly reſolved, and they give light to each other.

In the toothach, for inſtance, there is, *firſt*, a painful feeling; and, *ſecondly*, a conception and belief of ſome diſorder in the tooth, which is believed to be the cauſe of the uneaſy feeling. The firſt of theſe is a ſenſation, the ſecond

cond is perception; for it includes a concep- CHAP. tion and belief of an external object. But XVIII. theſe two things, though of different natures, are ſo conſtantly conjoined in our experience, and in our imagination, that we conſider them as one. We give the ſame name to both; for the toothach is the proper name of the pain we feel; and it is the proper name of the diſorder in the tooth which cauſes that pain. If it ſhould be made a queſtion, whether the toothach be in the mind that feels it, or in the tooth that is affected? much might be ſaid on both ſides, while it is not obſerved that the word has two meanings. But a little reflection ſatisfies us, that the pain is in the mind, and the diſorder in the tooth. If ſome Philoſopher ſhould pretend to have made a diſcovery, that the toothach, the gout, the headach, are only ſenſations in the mind, and that it is a vulgar error to conceive that they are diſtempers of the body, he might defend his ſyſtem in the ſame manner as thoſe, who affirm that there is no ſound nor colour nor taſte in bodies, defend that paradox. But both theſe ſyſtems, like moſt paradoxes, will be found to be only an abuſe of words.

We ſay that we *feel* the tooth-ach, not that we perceive it. On the other hand, we ſay that we *perceive* the colour of a body, not that we feel it. Can any reaſon be given for this difference of phraſeology? In anſwer to this queſtion, I apprehend, that both when we feel the toothach, and when we ſee a coloured body, there is ſenſation and perception conjoined. But, in the toothach, the ſenſation being very painful, engroſſes the attention; and therefore we ſpeak of it, as if it were felt only,

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only, and not perceived: Whereas, in seeing a coloured body, the sensation is indifferent, and draws no attention. The quality in the body, which we call its colour, is the only object of attention; and therefore we speak of it, as if it were perceived, and not felt. Though all Philosophers agree that in seeing colour there is sensation, it is not easy to persuade the vulgar, that, in seeing a coloured body, when the light is not too strong, nor the eye inflamed, they have any sensation or feeling at all.

There are some sensations, which, though they are very often felt, are never attended to, nor reflected upon. We have no conception of them; and therefore, in language, there is neither any name for them, nor any form of speech that supposes their existence. Such are the sensations of colour, and of all primary qualities; and therefore those qualities are said to be perceived, but not to be felt. Taste and smell, and heat and cold, have sensations that are often agreeable or disagreeable, in such a degree as to draw our attention; and they are sometimes said to be felt, and sometimes to be perceived. When disorders of the body occasion very acute pain, the uneasy sensation engrosses the attention, and they are said to be felt, not to be perceived.

There is another question relating to phraseology, which this subject suggests. A man says, he feels pain in such a particular part of his body; in his toe, for instance. Now, reason assures us, that pain being a sensation, can only be in the sentient being, as its subject, that is, in the mind. And though Philosophers have disputed much about the place of the

the mind; yet none of them ever placed it in the toe. What ſhall we ſay then in this caſe? do our ſenſes really deceive us, and make us believe a thing which our reaſon determines to be impoſſible? I anſwer, *firſt*, That, when a man ſays he has pain in his toe, he is perfectly underſtood, both by himſelf, and thoſe that hear him. This is all that he intends. He really feels what he and all men call a pain in the toe; and there is no deception in the matter. Whether therefore there be any impropriety in the phraſe or not, is of no conſequence in common life. It anſwers all the ends of ſpeech, both to the ſpeakers and the hearers. CHAP. XVIII.

In all languages, there are phraſes which have a diſtinct meaning; while, at the ſame time, there may be ſomething in the ſtructure of them that diſagrees with the analogy of grammar, or with the principles of philoſophy. And the reaſon is, becauſe language is not made either by Grammarians or Philoſophers. Thus we ſpeak of feeling pain, as if pain was ſomething diſtinct from the feeling of it. We ſpeak of a pain coming and going, and removing from one place to another. Such phraſes are meant by thoſe who uſe them in a ſenſe that is neither obſcure nor falſe. But the Philoſopher puts them into his alembic, reduces them to their firſt principles, draws out of them a ſenſe that was never meant, and ſo imagines that he has diſcovered an error of the vulgar.

I obſerve, *ſecondly*, That, when we conſider the ſenſation of pain by itſelf, without any reſpect to its cauſe, we cannot ſay with propriety, that the toe is either the place, or the ſubject of it. But it ought to be remembered, that when we ſpeak of pain in the toe, the ſenſation

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fation is combined in our thought, with the cauſe of it, which really is in the toe. The cauſe and the effect are combined in one complex notion, and the ſame name ſerves for both. It is the buſineſs of the Philoſopher to analyſe this complex notion, and to give different names to its different ingredients. He gives the name of *pain* to the ſenſation only, and the name of *diſorder* to the unknown cauſe of it. Then it is evident that the diſorder only is in the toe, and that it would be an error to think that the pain is in it. But we ought not to aſcribe this error to the vulgar, who never made the diſtinction, and who under the name of pain comprehend both the ſenſation and its cauſe.

Caſes ſometimes happen, which give occaſion even to the vulgar to diſtinguiſh the painful ſenſation from the diſorder which is the cauſe of it. A man who has had his leg cut off, many years after feels pain in a toe of that leg. The toe has now no exiſtence; and he perceives eaſily, that the toe can neither be the place, nor the ſubject of the pain which he feels; yet it is the ſame feeling he uſed to have from a hurt in the toe; and if he did not know that his leg was cut off, it would give him the ſame immediate conviction of ſome hurt or diſorder in the toe.

The ſame phænomenon may lead the Philoſopher, in all caſes, to diſtinguiſh ſenſation from perception. We ſay, that the man had a deceitful feeling, when he felt a pain in his toe after the leg was cut off; and we have a true meaning in ſaying ſo. But, if we will ſpeak accurately, our ſenſations cannot be deceitful; they muſt be what we feel them to be,

be, and can be nothing elſe. Where then lies the deceit? I anſwer, it lies not in the ſenſation, which is real, but in the ſeeming perception he had of a diſorder in his toe. This perception, which Nature had conjoined with the ſenſation, was in this inſtance fallacious.

The ſame reaſoning may be applied to every phænomenon that can, with propriety, be called a deception of ſenſe. As when one, who has the jaundice, ſees a body yellow, which is really white; or when a man ſees an object double, becauſe his eyes are not both directed to it; in theſe, and other like caſes, the ſenſations we have are real, and the deception is only in the perception which Nature has annexed to them.

Nature has connected our perception of external objects with certain ſenſations. If the ſenſation is produced, the correſponding perception follows even when there is no object, and in that caſe is apt to deceive us. In like manner, Nature has connected our ſenſations with certain impreſſions that are made upon the nerves and brain: And, when the impreſſion is made, from whatever cauſe, the correſponding ſenſation and perception immediately follows. Thus, in the man who feels pain in his toe after the leg is cut off, the nerve that went to the toe, part of which was cut off with the leg, had the ſame impreſſion made upon the remaining part, which, in the natural ſtate of his body, was cauſed by a hurt in the toe: And immediately this impreſſion is followed by the ſenſation and perception which Nature connected with it.

In like manner, if the ſame impreſſions, which are made at preſent upon my optic nerves

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nerves by the objects before me, could be made in the dark, I apprehend that I ſhould have the ſame ſenſations, and ſee the ſame objects which I now ſee. The impreſſions and ſenſations would in ſuch a caſe be real, and the perception only fallacious.

Let us next conſider the notions which our ſenſes give us of thoſe attributes of bodies called *powers*. This is the more neceſſary, becauſe power ſeems to imply ſome activity; yet we conſider body as a dead inactive thing, which does not act, but may be acted upon.

Of the mechanical powers aſcribed to bodies, that which is called their *vis inſita*, or *inertia*, may firſt be conſidered. By this is meant, no more than that bodies never change their ſtate of themſelves, either from reſt to motion, or from motion to reſt, or from one degree of velocity, or one direction to another. In order to produce any ſuch change, there muſt be ſome force impreſſed upon them; and the change produced is preciſely proportioned to the force impreſſed, and in the direction of that force.

That all bodies have this property, is a matter of fact, which we learn from daily obſervation, as well as from the moſt accurate experiments. Now it ſeems plain, that this does not imply any activity in body, but rather the contrary. A power in body to change its ſtate, would much rather imply activity than its continuing in the ſame ſtate: So that, although this property of bodies is called their *vis inſita*, or *vis inertiæ*, it implies no proper activity.

If

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If we conſider, next, the power of gravity, it is a fact, that all the bodies of our planetary ſyſtem gravitate towards each other. This has been fully proved by the great NEWTON. But this gravitation is not conceived by that Philoſopher to be a power inherent in bodies, which they exert of themſelves, but a force impreſſed upon them, to which they muſt neceſſarily yield. Whether this force be impreſſed by ſome ſubtile æther, or whether it be impreſſed by the power of the Supreme Being, or of ſome ſubordinate ſpiritual being, we do not know; but all ſound natural philoſophy, particularly that of NEWTON, ſuppoſes it to be an impreſſed force, and not inherent in bodies.

So that, when bodies gravitate, they do not properly act, but are acted upon: They only yield to an impreſſion that is made upon them. It is common in language to expreſs, by active verbs, many changes in things, wherein they are merely paſſive: And this way of ſpeaking is uſed chiefly when the cauſe of the change is not obvious to ſenſe. Thus we ſay that a ſhip ſails, when every man of common ſenſe knows that ſhe has no inherent power of motion, and is only driven by wind and tide. In like manner, when we ſay that the planets gravitate towards the ſun, we mean no more, but that, by ſome unknown power, they are drawn or impelled in that direction.

What has been ſaid of the power of gravitation may be applied to other mechanical powers, ſuch as coheſion, magnetiſm, electricity; and no leſs to chemical and medical powers. By all theſe, certain effects are produced, upon the application of one body to another. Our ſenſes diſcover the effect; but the power is latent.

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tent. We know there muſt be a cauſe of the effect, and we form a relative notion of it from its effect; and very often the ſame name is uſed to ſignify the unknown cauſe, and the known effect.

We aſcribe to vegetables, the power of drawing nouriſhment, growing and multiplying their kind. Here likewiſe the effect is manifeſt, but the cauſe is latent to ſenſe. Theſe powers, therefore, as well as all the other powers we aſcribe to bodies, are unknown cauſes of certain known effects. It is the buſineſs of philoſophy to inveſtigate the nature of thoſe powers as far as we are able, but our ſenſes leave us in the dark.

We may obſerve a great ſimilarity in the notions which our ſenſes give us of ſecondary qualities, of the diſorders we feel in our own bodies, and of the various powers of bodies which we have enumerated. They are all obſcure and relative notions, being a conception of ſome unknown cauſe of a known effect. Their names are, for the moſt part, common to the effect, and to its cauſe; and they are a proper ſubject of philoſophical diſquiſition. They might therefore, I think, not improperly, be called *occult* qualities.

This name indeed is fallen into diſgrace ſince the time of Des Cartes. It is ſaid to have been uſed by the Peripatetics to cloke their ignorance, and to ſtop all enquiry into the nature of thoſe qualities called *occult*. Be it ſo. Let thoſe anſwer for this abuſe of the word who were guilty of it. To call a thing occult, if we attend to the meaning of the word, is rather modeſtly to confeſs ignorance, than to cloke it. It is to point it out as a proper ſubject for the inveſtigation

inveſtigation of Philoſophers, whoſe proper buſineſs it is to better the condition of humanity, by diſcovering what was before hid from human knowledge.

Were I therefore to make a diviſion of the qualities of bodies as they appear to our ſenſes, I would divide them firſt into thoſe that are *manifeſt*, and thoſe that are *occult*. The manifeſt qualities are thoſe which Mr. LOCKE calls *primary*; ſuch as extenſion, figure, diviſibility, motion, hardneſs, ſoftneſs, fluidity. The nature of theſe is manifeſt even to ſenſe; and the buſineſs of the Philoſopher with regard to them, is not to find out their nature, which is well known, but to diſcover the effects produced by their various combinations; and with regard to thoſe of them which are not eſſential to matter, to diſcover their cauſes as far as he is able.

The ſecond claſs conſiſts of occult qualities, which may be ſubdivided into various kinds; as *firſt*, the ſecondary qualities; *ſecondly*, the diſorders we feel in our own bodies; and, *thirdly*, all the qualities which we call powers of bodies, whether mechanical, chemical, medical, animal or vegetable; or if there be any other powers not comprehended under theſe heads. Of all theſe the exiſtence is manifeſt to ſenſe, but the nature is occult; and here the Philoſopher has an ample field.

What is neceſſary for the conduct of our animal life, the bountiful Author of Nature hath made manifeſt to all men. But there are many other choice ſecrets of Nature, the diſcovery of which enlarges the power, and exalts the ſtate of man. Theſe are left to be diſcovered by the proper uſe of our rational powers. They are hid, not that they may be always

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concealed from human knowledge, but that we may be excited to ſearch for them. This is the proper buſineſs of a Philoſopher, and it is the glory of a man, and the beſt reward of his labour, to diſcover what Nature has thus concealed.

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Of Matter and of Space.

THE objects of ſenſe we have hitherto conſidered are qualities. But qualities muſt have a ſubject. We give the names of *matter*, *material ſubſtance*, and *body*, to the ſubject of ſenſible qualities; and it may be aſked, what this *matter* is?

I perceive in a billiard ball, figure, colour, and motion; but the ball is not figure, nor is it colour, nor motion, nor all theſe taken together; it is ſomething that has figure, and colour, and motion. This is a dictate of Nature, and the belief of all mankind.

As to the nature of this ſomething, I am afraid we can give little account of it, but that it has the qualities which our ſenſes diſcover.

But how do we know that they are qualities, and cannot exiſt without a ſubject? I confeſs I cannot explain how we know that they cannot exiſt without a ſubject, any more than I can explain how we know that they exiſt. We have the information of nature for their exiſtence; and I think we have the information of nature that they are qualities.

The

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The belief that figure, motion, and colour, are qualities, and require a ſubject, muſt either be a judgment of nature, or it muſt be diſcovered by reaſon, or it muſt be a prejudice that has no juſt foundation. There are Philoſophers who maintain, that it is a mere prejudice; that a body is nothing but a collection of what we call ſenſible qualities; and that they neither have nor need any ſubject. This is the opinion of Biſhop BERKELEY and Mr. HUME: and they were led to it by finding, that they had not in their minds any idea of ſubſtance. It could neither be an idea of ſenſation nor of reflection.

But to me nothing ſeems more abſurd, than that there ſhould be extenſion without any thing extended; or motion without any thing moved; yet I cannot give reaſons for my opinion, becauſe it ſeems to me ſelf-evident, and an immediate dictate of my nature.

And that it is the belief of all mankind, appears in the ſtructure of all languages; in which we find adjective nouns uſed to expreſs ſenſible qualities. It is well known that every adjective in language muſt belong to ſome ſubſtantive expreſſed or underſtood; that is, every quality muſt belong to ſome ſubject.

Senſible qualities make ſo great a part of the furniture of our minds, their kinds are ſo many, and their number ſo great, that if prejudice, and not nature, teach us to aſcribe them all to a ſubject, it muſt have a great work to perform, which cannot be accompliſhed in a ſhort time, nor carried on to the ſame pitch in every individual. We ſhould find not individuals only, but nations and ages, differing from each other in the progreſs which this

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prejudice had made in their ſentiments; but we find no ſuch difference among men. What one man accounts a quality, all men do, and ever did.

It ſeems therefore to be a judgment of nature, that the things immediately perceived are qualities, which muſt belong to a ſubject; and all the information that our ſenſes give us about this ſubject, is, that it is that to which ſuch qualities belong. From this it is evident, that our notion of body or matter, as diſtinguiſhed from its qualities, is a relative notion; and I am afraid it muſt always be obſcure until men have other faculties.

The Philoſopher in this ſeems to have no advantage above the vulgar; for as they perceive colour, and figure, and motion by their ſenſes as well as he does, and both are equally certain that there is a ſubject of thoſe qualities, ſo the notions which both have of this ſubject are equally obſcure. When the Philoſopher calls it a *ſubſtratum*, and a ſubject of inheſion, thoſe learned words convey no meaning but what every man underſtands and expreſſes, by ſaying in common language, that it is a thing extended, and ſolid, and moveable.

The relation which ſenſible qualities bear to their ſubject, that is, to body, is not, however, ſo dark, but that it is eaſily diſtinguiſhed from all other relations. Every man can diſtinguiſh it from the relation of an effect to its cauſe; of a mean to its end; or of a ſign to the thing ſignified by it.

I think it requires ſome ripeneſs of underſtanding to diſtinguiſh the qualities of a body from the body. Perhaps this diſtinction is not made by brutes, nor by infants; and if any one

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one thinks that this distinction is not made by our senses, but by some other power of the mind, I will not dispute this point, provided it be granted, that men, when their faculties are ripe, have a natural conviction, that sensible qualities cannot exist by themselves without some subject to which they belong.

I think, indeed, that some of the determinations we form concerning matter cannot be deduced solely from the testimony of sense, but must be referred to some other source.

There seems to be nothing more evident, than that all bodies must consist of parts; and that every part of a body is a body, and a distinct being which may exist without the other parts; and yet I apprehend this conclusion is not deduced solely from the testimony of sense: For, besides that it is a necessary truth, and therefore no object of sense, there is a limit beyond which we cannot perceive any division of a body. The parts become too small to be perceived by our senses; but we cannot believe that it becomes then incapable of being farther divided, or that such division would make it not to be a body.

We carry on the division and subdivision in our thought far beyond the reach of our senses, and we can find no end to it: Nay, I think we plainly discern, that there can be no limit beyond which the division cannot be carried.

For if there be any limit to this division, one of two things must necessarily happen. Either we have come by division to a body which is extended, but has no parts, and is absolutely indivisible; or this body is divisible, but as soon as it is divided, it becomes no body. Both these positions seem to me absurd,

and

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and one or the other is the neceſſary conſequence of ſuppoſing a limit to the diviſibility of matter.

On the other hand, if it is admitted that the diviſibility of matter has no limit, it will follow, that no body can be called one individual ſubſtance. You may as well call it two, or twenty, or two hundred. For when it is divided into parts, every part is a being or ſubſtance diſtinct from all the other parts, and was ſo even before the diviſion: Any one part may continue to exiſt, though all the other parts were annihilated.

There is, indeed, a principle long received, as an axiom in metaphyſics, which I cannot reconcile to the diviſibility of matter. It is, That every being is one, *omne ens eſt unum.* By which, I ſuppoſe, is meant, that every thing that exiſts muſt either be one indiviſible being, or compoſed of a determinate number of indiviſible beings. Thus an army may be divided into regiments, a regiment into companies, and a company into men. But here the diviſion has its limit; for you cannot divide a man without deſtroying him, becauſe he is an individual; and every thing, according to this axiom, muſt be an individual, or made up of individuals.

That this axiom will hold with regard to an army, and with regard to many other things, muſt be granted: But I require the evidence of its being applicable to all beings whatſoever.

Leibnitz, conceiving that all beings muſt have this metaphyſical unity, was by this led to maintain, that matter, and indeed the whole

whole univerſe, is made up of monades, that is, ſimple and indiviſible ſubſtances.

Perhaps the ſame apprehenſion might lead BOSCOVICK into his hypotheſis, which ſeems much more ingenious; to wit, that matter is compoſed of a definite number of mathematical points, endowed with certain powers of attraction and repulſion.

The diviſibility of matter without any limit, ſeems to me more tenable than either of theſe hypotheſes; nor do I lay much ſtreſs upon the metaphyſical axiom, conſidering its origin. Metaphyſicians thought proper to make the attributes common to all beings the ſubject of a ſcience. It muſt be a matter of ſome difficulty to find out ſuch attributes: And, after racking their invention, they have ſpecified three, to wit, unity, verity, and goodneſs; and theſe, I ſuppoſe, have been invented to make a number, rather than from any clear evidence of their being univerſal.

There are other determinations concerning matter, which, I think, are not ſolely founded upon the teſtimony of ſenſe: Such as, that it is impoſſible that two bodies ſhould occupy the ſame place at the ſame time; or that the ſame body ſhould be in different places at the ſame time; or that a body can be moved from one place to another, without paſſing through the intermediate places, either in a ſtraight courſe, or by ſome circuit. Theſe appear to be neceſſary truths, and therefore cannot be concluſions of our ſenſes; for our ſenſes teſtify only what is, and not what muſt neceſſarily be.

We are next to conſider our notion of ſpace. It may be obſerved, that although ſpace be not

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not perceived by any of our ſenſes when all matter is removed; yet, when we perceive any of the primary qualities, ſpace preſents itſelf as a neceſſary concomitant: For there can neither be extenſion, nor motion, nor figure, nor diviſion, nor coheſion of parts without ſpace.

There are only two of our ſenſes by which the notion of ſpace enters into the mind; to wit, touch and ſight. If we ſuppoſe a man to have neither of theſe ſenſes, I do not ſee how he could ever have any conception of ſpace. Suppoſing him to have both, until he ſees or feels other objects, he can have no notion of ſpace: It has neither colour nor figure to make it an object of ſight: It has no tangible quality to make it an object of touch. But other objects of ſight and touch carry the notion of ſpace along with them; and not the notion only, but the belief of it: For a body could not exiſt if there was no ſpace to contain it: It could not move if there was no ſpace: Its ſituation, its diſtance, and every relation it has to other bodies, ſuppoſe ſpace.

But though the notion of ſpace ſeems not to enter at firſt into the mind, until it is introduced by the proper objects of ſenſe; yet, being once introduced, it remains in our conception and belief, though the objects which introduced it be removed. We ſee no abſurdity in ſuppoſing a body to be annihilated; but the ſpace that contained it remains; and to ſuppoſe that annihilated, ſeems to be abſurd. It is ſo much allied to nothing or emptineſs, that it ſeems incapable of annihilation or of creation.

Space

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Space not only retains a firm hold of our belief, even when we ſuppoſe all the objects that introduced it to be annihilated, but it ſwells to immenſity. We can ſet no limits to it, either of extent or of duration. Hence we call it immenſe, eternal, immoveable, and indeſtructible. But it is only an immenſe, eternal, immoveable, and indeſtructible void or emptineſs. Perhaps we may apply to it what the Peripatetics ſaid of their firſt matter, that whatever it is, it is potentially only, not actually.

When we conſider parts of ſpace that have meaſure and figure, there is nothing we underſtand better, nothing about which we can reaſon ſo clearly, and to ſo great extent. Extenſion and figure are circumſcribed parts of ſpace, and are the object of geometry, a ſcience in which human reaſon has the moſt ample field, and can go deeper, and with more certainty than in any other. But when we attempt to comprehend the whole of ſpace, and to trace it to its origin, we loſe ourſelves in the ſearch. The profound ſpeculation of ingenious men upon this ſubject differ ſo widely, as may lead us to ſuſpect, that the line of human underſtanding is too ſhort to reach the bottom of it.

Biſhop BERKELEY, I think, was the firſt who obſerved, that the extenſion, figure, and ſpace, of which we ſpeak in common language, and of which geometry treats, are originally perceived by the ſenſe of touch only; but that there is a notion of extenſion, figure, and ſpace, which may be got by ſight, without any aid from touch. To diſtinguiſh theſe, he calls the firſt tangible extenſion, tangible figure, and tangible ſpace; the laſt he calls viſible.

As

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As I think this diſtinction very important in the philoſophy of our ſenſes, I ſhall adopt the names uſed by the inventor to expreſs it; remembering what has been already obſerved, that ſpace, whether tangible or viſible, is not ſo properly an object of ſenſe, as a neceſſary concomitant of the objects both of ſight and touch.

The reader may likewiſe be pleaſed to attend to this, that when I uſe the names of tangible and viſible ſpace, I do not mean to adopt Biſhop BERKELEY's opinion, ſo far as to think that they are really different things, and altogether unlike. I take them to be different conceptions of the ſame thing; the one very partial, and the other more complete; but both diſtinct and juſt, as far as they reach.

Thus when I ſee a ſpire at a very great diſtance, it ſeems like the point of a bodkin; there appears no vane at the top, no angles. But when I view the ſame object at a ſmall diſtance, I ſee a huge pyramid of ſeveral angles with a vane on the top. Neither of theſe appearances is fallacious. Each of them is what it ought to be, and what it muſt be, from ſuch an object ſeen at ſuch different diſtances. Theſe different appearances of the ſame object may ſerve to illuſtrate the different conceptions of ſpace, according as they are drawn from the information of ſight alone, or as they are drawn from the additional information of touch.

Our ſight alone, unaided by touch, gives a very partial notion of ſpace, but yet a diſtinct one. When it is conſidered, according to this partial notion, I call it viſible ſpace. The ſenſe of touch gives a much more complete notion of

of ſpace; and when it is conſidered according to this notion I call it tangible ſpace. Perhaps there may be intelligent beings of a higher order, whoſe conceptions of ſpace are much more complete than thoſe we have from both ſenſes. Another ſenſe added to thoſe of ſight and touch, might, for what I know, give us conceptions of ſpace, as different from thoſe we can now attain, as tangible ſpace is from viſible; and might reſolve many knotty points concerning it, which, from the imperfection of our faculties, we cannot by any labour untie.

BERKELEY acknowledges that there is an exact correſpondence between the viſible figure and magnitude of objects, and the tangible; and that every modification of the one has a modification of the other correſponding. He acknowledges likewiſe, that Nature has eſtabliſhed ſuch a connection between the viſible figure and magnitude of an object, and the tangible, that we learn by experience to know the tangible figure and magnitude from the viſible. And having been accuſtomed to do ſo from infancy, we get the habit of doing it with ſuch facility and quickneſs, that we think we ſee the tangible figure, magnitude, and diſtance of bodies, when, in reality, we only collect thoſe tangible qualities from the correſponding viſible qualities, which are natural ſigns of them.

The correſpondence and connection which BERKELEY ſhews to be between the viſible figure, and magnitude of objects, and their tangible figure and magnitude, is in ſome reſpects very ſimilar to that which we have obſerved between our ſenſations, and the primary qualities

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qualities with which they are connected. No ſooner is the ſenſation felt, than immediately we have the conception and belief of the correſponding quality. We give no attention to the ſenſation; it has not a name; and it is difficult to perſuade us that there was any ſuch thing.

In like manner, no ſooner is the viſible figure and magnitude of an object ſeen, than immediately we have the conception and belief of the correſponding tangible figure and magnitude. We give no attention to the viſible figure and magnitude. It is immediately forgot, as if it had never been perceived; and it has no name in common language; and indeed, until BERKELEY pointed it out as a ſubject of ſpeculation, and gave it a name, it had none among Philoſophers, excepting in one inſtance, relating to the heavenly bodies, which are beyond the reach of touch. With regard to them, what BERKELEY calls viſible magnitude, was, by Aſtronomers, called apparent magnitude.

There is ſurely an apparent magnitude, and an apparent figure of terreſtrial objects, as well as of celeſtial; and this is what BERKELEY calls their viſible figure and magnitude. But this was never made an object of thought among Philoſophers, until that author gave it a name, and obſerved the correſpondence and connection between it and tangible magnitude and figure, and how the mind gets the habit of paſſing ſo inſtantaneouſly from the viſible figure, as a ſign to the tangible figure, as the thing ſignified by it, that the firſt is perfectly forgot, as if it had never been perceived.

Viſible figure, extenſion and ſpace, may be made a ſubject of mathematical ſpeculation, as well as the tangible. In the viſible, we find

two

two dimenſions only; in the tangible three. In the one, magnitude is meaſured by angles; in the other by lines. Every part of viſible ſpace bears ſome proportion to the whole; but tangible ſpace being immenſe, any part of it bears no proportion to the whole.

Such differences in their properties led Biſhop BERKELEY to think, that viſible and tangible magnitude and figure, are things totally different and diſſimilar, and cannot both belong to the ſame object.

And upon this diſſimilitude is grounded one of the ſtrongeſt arguments by which his ſyſtem is ſupported. For it may be ſaid, if there be external objects which have a real extenſion and figure, it muſt be either tangible extenſion and figure, or viſible, or both. The laſt appears abſurd; nor was it ever maintained by any man, that the ſame object has two kinds of extenſion and figure, totally diſſimilar. There is then only one of the two really in the object; and the other muſt be ideal. But no reaſon can be aſſigned why the perceptions of one ſenſe ſhould be real, while thoſe of another are only ideal; and he who is perſuaded that the objects of ſight are ideas only, has equal reaſon to believe ſo of the objects of touch.

This argument, however, loſes all its force, if it be true, as was formerly hinted, that viſible figure and extenſion are only a partial conception, and the tangible figure and extenſion a more complete conception of that figure and extenſion which is really in the object.

It has been proved very fully by Biſhop BERKELEY, that ſight alone, without any aid from the informations of touch, gives us no perception nor even conception of the diſtance

of

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of any object from the eye. But he was not aware, that this very principle overturns the argument for his syſtem, taken from the difference between viſible and tangible extenſion and figure: For, ſuppoſing external objects to exiſt, and to have that tangible extenſion and figure which we perceive, it follows demonſtrably, from the principle now mentioned, that their viſible extenſion and figure muſt be juſt what we ſee it to be.

The rules of perſpective, and of the projection of the ſphere, which is a branch of perſpective, are demonſtrable They ſuppoſe the exiſtence of external objects, which have a tangible extenſion and figure; and, upon that ſuppoſition, they demonſtrate what muſt be the viſible extenſion and figure of ſuch objects, when placed in ſuch a poſition, and at ſuch a diſtance.

Hence it is evident, that the viſible figure and extenſion of objects is ſo far from being incompatible with the tangible, that the firſt is a neceſſary conſequence from the laſt, in beings that ſee as we do. The correſpondence between them is not arbitrary, like that between words and the thing they ſignify, as BERKELEY thought; but it reſults neceſſarily from the nature of the two ſenſes; and this correſpondence being always found in experience to be exactly what the rules of perſpective ſhow that it ought to be if the ſenſes give true information, is an argument of the truth of both.

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Of the Evidence of Senſe, and of Belief in general.

THE intention of Nature in the powers which we call the external ſenſes, is evident. They are intended to give us that information of external objects which the ſupreme Being ſaw to be proper for us in our preſent ſtate; and they give to all mankind the information neceſſary for life, without reaſoning, without any art or inveſtigation on our part.

The moſt uninſtructed peaſant has as diſtinct a conception, and as firm a belief of the immediate object of his ſenſes, as the greateſt Philoſopher; and with this he reſts ſatisfied, giving himſelf no concern how he came by this conception and belief. But the Philoſopher is impatient to know how his conception of external objects, and his belief of their exiſtence, is produced. This, I am afraid, is hid in impenetrable darkneſs. But where there is no knowledge, there is the more room for conjecture; and of this Philoſophers have always been very liberal.

The dark cave and ſhadows of PLATO, the ſpecies of ARISTOTLE, the films of EPICURUS, and the ideas and impreſſions of modern Philoſophers, are the productions of human fancy, ſucceſſively invented to ſatisfy the eager deſire of knowing how we perceive external objects; but they are all deficient in the two eſſential characters of a true and philoſophical account of the phænomenon: For we neither have any evidence

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evidence of their exiſtence, nor, if they did exiſt, can it be ſhown how they would produce perception.

It was before obſerved, that there are two ingredients in this operation of perception: *Firſt*, The conception or notion of the object; and, *ſecondly*, The belief of its preſent exiſtence; both are unaccountable.

That we can aſſign no adequate cauſe of our firſt conceptions of things, I think, is now acknowledged by the moſt enlightened Philoſophers. We know that ſuch is our conſtitution, that in certain circumſtances we have certain conceptions; but how they are produced, we know no more than how we ourſelves were produced.

When we have got the conception of external objects by our ſenſes, we can analyſe them in our thought into their ſimple ingredients; and we can compound thoſe ingredients into various new forms, which the ſenſes never preſented. But it is beyond the power of human imagination to form any conception, whoſe ſimple ingredients have not been furniſhed by Nature in a manner unaccountable to our underſtanding.

We have an immediate conception of the operations of our own minds, joined with a belief of their exiſtence; and this we call conſciouſneſs. But this is only giving a name to this ſource of our knowledge. It is not a diſcovery of its cauſe. In like manner, we have, by our external ſenſes, a conception of external objects, joined with a belief of their exiſtence; and this we call perception. But this is only giving a name to another ſource of our knowledge, without diſcovering its cauſe.

We

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We know, that when certain impreſſions are made upon our organs, nerves, and brain, certain correſponding ſenſations are felt, and certain objects are both conceived and believed to exiſt. But in this train of operations Nature works in the dark. We can neither diſcover the cauſe of any one of them, nor any neceſſary connection of one with another: And whether they are connected by any neceſſary tie, or only conjoined in our conſtitution by the will of Heaven, we know not.

That any kind of impreſſion upon a body ſhould be the efficient cauſe of ſenſation, appears very abſurd. Nor can we perceive any neceſſary connection between ſenſation and the conception and belief of an external object. For any thing we can diſcover, we might have been ſo framed as to have all the ſenſations we now have by our ſenſes, without any impreſſions upon our organs, and without any conception of any external object. For any thing we know, we might have been ſo made as to perceive external objects, without any impreſſions on bodily organs, and without any of thoſe ſenſations which invariably accompany perception in our preſent frame.

If our conception of external objects be unaccountable, the conviction and belief of their exiſtence, which we get by our ſenſes, is no leſs ſo.

Belief, aſſent, conviction, are words which I think do not admit of logical definition, becauſe the operation of mind ſignified by them is perfectly ſimple, and of its own kind. Nor do they need to be defined, becauſe they are common words, and well underſtood.

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Belief muſt have an object. For he that believes, muſt believe ſomething; and that which he believes is called the object of his belief. Of this object of his belief, he muſt have ſome conception, clear or obſcure; for although there may be the moſt clear and diſtinct conception of an object without any belief of its exiſtence, there can be no belief without conception.

Belief is always expreſſed in language by a propoſition, wherein ſomething is affirmed or denied. This is the form of ſpeech which in all languages is appropriated to that purpoſe, and without belief there could be neither affirmation or denial, nor ſhould we have any form of words to expreſs either. Belief admits of all degrees from the ſlighteſt ſuſpicion to the fulleſt aſſurance. Theſe things are ſo evident to every man that reflects, that it would be abuſing the reader's patience to dwell upon them.

I proceed to obſerve, that there are many operations of mind in which, when we analyſe them as far as we are able, we find belief to be an eſſential ingredient. A man cannot be conſcious of his own thoughts, without believing that he thinks. He cannot perceive an object of ſenſe, without believing that it exiſts. He cannot diſtinctly remember a paſt event without believing that it did exiſt. Belief therefore is an ingredient in conſciouſneſs, in perception, and in remembrance.

Not only in moſt of our intellectual operations, but in many of the active principles of the human mind, belief enters as an ingredient. Joy and ſorrow, hope and fear, imply a belief of good or ill, either preſent or in expectation.

pectation. Eſteem, gratitude, pity, and re- CHAP. XX.
ſentment, imply a belief of certain qualities in their objects. In every action that is done for an end, there muſt be a belief of its tendency to that end. So large a ſhare has belief in our intellectual operations, in our active principles, and in our actions themſelves, that as faith in things divine is repreſented as the main ſpring in the life of a Chriſtian, ſo belief in general is the main ſpring in the life of a man.

That men often believe what there is no juſt ground to believe, and thereby are led into hurtful errors, is too evident to be denied: And, on the other hand, that there are juſt grounds of belief, can as little be doubted by any man who is not a perfect ſceptic.

We give the name of evidence to whatever is a ground of belief. To believe without evidence is a weakneſs which every man is concerned to avoid, and which every man wiſhes to avoid. Nor is it in a man's power to believe any thing longer than he thinks he has evidence.

What this evidence is, is more eaſily felt than deſcribed. Thoſe who never reflected upon its nature, feel its influence in governing their belief. It is the buſineſs of the Logician to explain its nature, and to diſtinguiſh its various kinds and degrees; but every man of underſtanding can judge of it, and commonly judges right, when the evidence is fairly laid before him, and his mind is free from prejudice. A man who knows nothing of the theory of viſion, may have a good eye; and a man who never ſpeculated about evidence in the abſtract, may have a good judgment.

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The common occaſions of life lead us to diſtinguiſh evidence into different kinds, to which we give names that are well underſtood; ſuch as the evidence of ſenſe, the evidence of memory, the evidence of conſciouſneſs, the evidence of teſtimony, the evidence of axioms, the evidence of reaſoning: All men of common underſtanding agree, that each of theſe kinds of evidence may afford juſt ground of belief, and they agree very generally in the circumſtances that ſtrengthen or weaken them.

Philoſophers have endeavoured by analyſing the different ſorts of evidence, to find out ſome common nature wherein they all agree, and thereby to reduce them all to one. This was the aim of the ſchoolmen in their intricate diſputes about the criterion of truth. Des Cartes placed this criterion of truth in clear and diſtinct perception, and laid it down as a maxim, that whatever we clearly and diſtinctly perceive to be true, is true; but it is difficult to know what he underſtands by clear and diſtinct perception in this maxim. Mr. Locke placed it in a perception of the agreement or diſagreement of our ideas, which perception is immediate in intuitive knowledge, and by the intervention of other ideas in reaſoning.

I confeſs that, although I have, as I think, a diſtinct notion of the different kinds of evidence above mentioned, and perhaps of ſome others, which it is unneceſſary here to enumerate, yet I am not able to find any common nature to which they may all be reduced. They ſeem to me to agree only in this, that they are all fitted by Nature to produce belief in the human mind, ſome of them in the higheſt degree, which we call certainty, others in various degrees according to circumſtances.

I ſhall

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I shall take it for granted, that the evidence of sense, when the proper circumstances concur, is good evidence, and a just ground of belief. My intention in this place is only to compare it with the other kinds that have been mentioned, that we may judge whether it be reducible to any of them, or of a nature peculiar to itself.

First, It seems to be quite different from the evidence of reasoning. All good evidence is commonly called reasonable evidence, and very justly, because it ought to govern our belief as reasonable creatures. And, according to this meaning, I think the evidence of sense no less reasonable than that of demonstration. If Nature give us information of things that concern us, by other means than by reasoning, reason itself will direct us to receive that information with thankfulness, and to make the best use of it.

But when we speak of the evidence of reasoning as a particular kind of evidence, it means the evidence of propositions that are inferred by reasoning, from propositions already known and believed. Thus the evidence of the fifth proposition of the first book of EUCLID's Elements consists in this, That it is shown to be the necessary consequence of the axioms, and of the preceding propositions. In all reasoning, there must be one or more premises, and a conclusion drawn from them. And the premises are called the reason why we must believe the conclusion which we see to follow from them.

That the evidence of sense is of a different kind, needs little proof. No man seeks a reason for believing what he sees or feels; and if

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if he did, it would be difficult to find one. But though he can give no reaſon for believing his ſenſes, his belief remains as firm as if it were grounded on demonſtration.

Many eminent Philoſophers thinking it unreaſonable to believe, when they could not ſhow a reaſon, have laboured to furniſh us with reaſons for believing our ſenſes; but their reaſons are very inſufficient, and will not bear examination. Other Philoſophers have ſhewn very clearly the fallacy of theſe reaſons, and have, as they imagine, diſcovered invincible reaſons againſt this belief; but they have never been able either to ſhake it in themſelves, or to convince others. The ſtateſman continues to plod, the ſoldier to fight, and the merchant to export and import, without being in the leaſt moved by the demonſtrations that have been offered of the non-exiſtence of thoſe things about which they are ſo ſeriouſly employed. And a man may as ſoon, by reaſoning, pull the moon out of her orbit, as deſtroy the belief of the objects of ſenſe.

Shall we ſay then that the evidence of ſenſe is the ſame with that of axioms, or ſelf-evident truths? I anſwer, *firſt*, That all modern Philoſophers ſeem to agree, that the exiſtence of the objects of ſenſe is not ſelf-evident, becauſe ſome of them have endeavoured to prove it by ſubtile reaſoning, others to refute it. Neither of theſe can conſider it as ſelf-evident.

Secondly, I would obſerve, that the word *axiom* is taken by Philoſophers in ſuch a ſenſe, as that the exiſtence of the objects of ſenſe cannot, with propriety, be called an axiom. They give the name of axiom only to ſelf-evident truths that are neceſſary, and are not limited

mited to time and place, but must be true at all times, and in all places. The truths attested by our senses are not of this kind; they are contingent, and limited to time and place.

Thus, that one is the half of two, is an axiom. It is equally true at all times, and in all places. We perceive, by attending to the proposition itself, that it cannot but be true; and therefore it is called an eternal, necessary and immutable truth. That there is at present a chair on my right hand, and another on my left, is a truth attested by my senses; but it is not necessary, nor eternal, nor immutable. It may not be true next minute; and therefore, to call it an axiom, would, I apprehend, be to deviate from the common use of the word.

Thirdly, If the word axiom be put to signify every truth which is known immediately, without being deduced from any antecedent truth, then the existence of the objects of sense may be called an axiom. For my senses give me as immediate conviction of what they testify, as my understanding gives of what is commonly called an axiom.

There is no doubt an analogy between the evidence of sense and the evidence of testimony. Hence we find in all languages the analogical expressions of the *testimony of sense*, of giving *credit* to our senses, and the like. But there is a real difference between the two, as well as a similitude. In believing upon testimony, we rely upon the authority of a person who testifies: But we have no such authority for believing our senses.

Shall we say then that this belief is the inspiration of the Almighty? I think this may be said

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ſaid in a good ſenſe; for I take it to be the immediate effect of our conſtitution, which is the work of the Almighty. But if inſpiration be underſtood to imply a perſuaſion of its coming from God, our belief of the objects of ſenſe is not inſpiration; for a man would believe his ſenſes though he had no notion of a Deity. He who is perſuaded that he is the workmanſhip of God, and that it is a part of his conſtitution to believe his ſenſes, may think that a good reaſon to confirm his belief: But he had the belief before he could give this or any other reaſon for it.

If we compare the evidence of ſenſe with that of memory, we find a great reſemblance, but ſtill ſome difference. I remember diſtinctly to have dined yeſterday with ſuch a company. What is the meaning of this? it is, that I have a diſtinct conception and firm belief of this paſt event; not by reaſoning, not by teſtimony, but immediately from my conſtitution: And I give the name of memory to that part of my conſtitution, by which I have this kind of conviction of paſt events.

I ſee a chair on my right hand. What is the meaning of this? it is, that I have, by my conſtitution, a diſtinct conception and firm belief of the preſent exiſtence of the chair in ſuch a place, and in ſuch a poſition; and I give the name of ſeeing to that part of my conſtitution, by which I have this immediate conviction. The two operations agree in the immediate conviction which they give. They agree in this alſo, that the things believed are not neceſſary, but contingent, and limited to time and place. But they differ in two reſpects; *firſt*, That memory has ſomething for its object that

that did exiſt in time paſt; but the object of ſight, and of all the ſenſes, muſt be ſomething which exiſts at preſent. And, *ſecondly*, That I ſee by my eyes, and only when they are directed to the object, and when it is illuminated. But my memory is not limited by any bodily organ that I know, nor by light and darkneſs, though it has its limitations of another kind.

Theſe differences are obvious to all men, and very reaſonably lead them to conſider ſeeing and remembering as operations ſpecifically different. But the nature of the evidence they give has a great reſemblance. A like difference and a like reſemblance there is between the evidence of ſenſe and that of conſciouſneſs, which I leave the reader to trace.

As to the opinion, that evidence conſiſts in a perception of the agreement or diſagreement of ideas, we may have occaſion to conſider it more particularly in another place. Here I only obſerve, that, when taken in the moſt favourable ſenſe, it may be applied with propriety to the evidence of reaſoning, and to the evidence of ſome axioms. But I cannot ſee how, in any ſenſe, it can be applied to the evidence of conſciouſneſs, to the evidence of memory, or to that of the ſenſes.

When I compare the different kinds of evidence above mentioned, I confeſs, after all, that the evidence of reaſoning, and that of ſome neceſſary and ſelf-evident truths, ſeems to be the leaſt myſterious, and the moſt perfectly comprehended; and therefore I do not think it ſtrange that Philoſophers ſhould have endeavoured to reduce all kinds of evidence to theſe.

When

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When I ſee a propoſition to be ſelf-evident and neceſſary, and that the ſubject is plainly included in the predicate, there ſeems to be nothing more that I can deſire, in order to underſtand why I believe it. And when I ſee a conſequence that neceſſarily follows from one or more ſelf-evident propoſitions, I want nothing more with regard to my belief of that conſequence. The light of truth ſo fills my mind in theſe caſes, that I can neither conceive, nor deſire any thing more ſatisfying.

On the other hand, when I remember diſtinctly a paſt event, or ſee an object before my eyes, this commands my belief no leſs than an axiom. But when, as a Philoſopher, I reflect upon this belief, and want to trace it to its origin, I am not able to reſolve it into neceſſary and ſelf-evident axioms, or concluſions that are neceſſarily conſequent upon them. I ſeem to want that evidence which I can beſt comprehend, and which gives perfect ſatisfaction to an inquiſitive mind; yet it is ridiculous to doubt, and I find it is not in my power. An attempt to throw off this belief, is like an attempt to fly, equally ridiculous and impracticable.

To a Philoſopher, who has been accuſtomed to think that the treaſure of his knowledge is the acquiſition of that reaſoning power of which he boaſts, it is no doubt humiliating to find, that his reaſon can lay no claim to the greater part of it.

By his reaſon, he can diſcover certain abſtract and neceſſary relations of things: But his knowledge of what really exiſts, or did exiſt, comes by another channel, which is open to thoſe

those who cannot reason. He is led to it in the dark, and knows not how he came by it. CHAP. XX.

It is no wonder that the pride of philosophy should lead some to invent vain theories, in order to account for this knowledge; and others, who see this to be impractible, to spurn at a knowledge they cannot account for, and vainly attempt to throw it off, as a reproach to their understanding. But the wise and the humble will receive it as the gift of Heaven, and endeavour to make the best use of it.

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Of the Improvement of the Senses.

OUR senses may be considered in two views; *first*, As they afford us agreeable sensations, or subject us to such as are disagreeable; and, *secondly*, As they give us information of things that concern us.

In the *first* view, they neither require nor admit of improvement. Both the painful and the agreeable sensations of our external senses are given by nature for certain ends; and they are given in that degree which is the most proper for their end. By diminishing or increasing them, we should not mend, but mar the work of Nature.

Bodily pains are indications of some disorder or hurt of the body, and admonitions to use the best means in our power to prevent or remove their causes. As far as this can be done by temperance, exercise, regimen, or the skill of the physician, every man hath sufficient inducement to do it.

When

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When pain cannot be prevented or removed, it is greatly alleviated by patience and fortitude of mind. While the mind is ſuperior to pain, the man is not unhappy, though he may be exerciſed. It leaves no ſting behind it, but rather matter of triumph and agreeable reflection, when borne properly, and in a good cauſe. The Canadians have taught us, that even ſavages may acquire a ſuperiority to the moſt excruciating pains; and, in every region of the earth, inſtances will be found, where a ſenſe of duty, of honour, or even of worldly intereſt, have triumphed over it.

It is evident, that Nature intended for man, in his preſent ſtate, a life of labour and toil, wherein he may be occaſionally expoſed to pain and danger: And the happieſt man is not he who has felt leaſt of thoſe evils, but he whoſe mind is fitted to bear them by real magnanimity.

Our active and perceptive powers are improved and perfected by uſe and exerciſe. This is the conſtitution of Nature. But, with regard to the agreeable and diſagreeable ſenſations we have by our ſenſes, the very contrary is an eſtabliſhed conſtitution of Nature: The frequent repetition of them weakens their force: Senſations at firſt very diſagreeable, by uſe become tolerable, and at laſt perfectly indifferent. And thoſe that are at firſt very agreeable, by frequent repetition become inſipid, and at laſt perhaps give diſguſt. Nature has ſet limits to the pleaſures of ſenſe, which we cannot paſs; and all ſtudied gratifications of them, as it is mean and unworthy of a man, ſo it is fooliſh and fruitleſs.

The

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The man who, in eating and drinking, and in other gratifications of ſenſe, obeys the calls of Nature, without affecting delicacies and refinements, has all the enjoyment that the ſenſes can afford. If one could by a ſoft and luxurious life, acquire a more delicate ſenſibility to pleaſure, it muſt be at the expence of a like ſenſibility to pain, from which he can never promiſe exemption; and at the expence of cheriſhing many diſeaſes which produce pain.

The improvement of our external ſenſes, as they are the means of giving us information, is a ſubject more worthy of our attention: For although they are not the nobleſt and moſt exalted powers of our nature, yet they are not the leaſt uſeful. All that we know or can know of the material world, muſt be grounded upon their information; and the Philoſopher, as well as the day-labourer, muſt be indebted to them for the largeſt part of his knowledge.

Some of our perceptions by the ſenſes may be called original, becauſe they require no previous experience or learning; but the far greateſt part is acquired, and the fruit of experience.

Three of our ſenſes, to wit, ſmell, taſte, and hearing, originally give us only certain ſenſations, and a conviction that theſe ſenſations are occaſioned by ſome external object. We give a name to that quality of the object by which it is fitted to produce ſuch a ſenſation, and connect that quality with the object, and with its other qualities.

Thus we learn, that a certain ſenſation of ſmell is produced by a roſe; and that quality in the roſe, by which it is fitted to produce this

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this ſenſation, we call the ſmell of the roſe. Here it is evident that the ſenſation is original. The perception, that the roſe has that quality, which we call its ſmell, is acquired. In like manner, we learn all thoſe qualities in bodies, which we call their ſmell, their taſte, their ſound. Theſe are all ſecondary qualities, and we give the ſame name to them which we give to the ſenſations they produce; not from any ſimilitude between the ſenſation and the quality of the ſame name, but becauſe the quality is ſignified to us by the ſenſation as its ſign, and becauſe our ſenſes give us no other knowledge of the quality, but that it is fit to produce ſuch a ſenſation.

By the other two ſenſes, we have much more ample information. By ſight, we learn to diſtinguiſh objects by their colour, in the ſame manner as by their ſound, taſte, and ſmell. By this ſenſe we perceive viſible objects to have extenſion in two dimenſions, to have viſible figure and magnitude, and a certain angular diſtance from one another. Theſe I conceive are the original perceptions of ſight.

By touch, we not only perceive the temperature of bodies as to heat and cold, which are ſecondary qualities, but we perceive originally their three dimenſions, their tangible figure and magnitude, their linear diſtance from one another, their hardneſs, ſoftneſs, or fluidity. Theſe qualities we originally perceive by touch only; but, by experience, we learn to perceive all or moſt of them by ſight.

We learn to perceive, by one ſenſe, what originally could have been perceived only by another,

ther, by finding a connection between the objects of the different senses. Hence the original perceptions, or the sensations of one sense become signs of whatever has always been found connected with them; and from the sign the mind passes immediately to the conception and belief of the thing signified: And although the connection in the mind between the sign, and the thing signified by it, be the effect of custom, this custom becomes a second nature, and it is difficult to distinguish it from the original power of perception.

Thus, if a sphere of one uniform colour be set before me, I perceive evidently by my eye its spherical figure, and its three dimensions. All the world will acknowledge, that by sight only, without touching it, I may be certain that it is a sphere; yet it is no less certain, that, by the original power of sight, I could not perceive it to be a sphere, and to have three dimensions. The eye originally could only perceive two dimensions, and a gradual variation of colour on the different sides of the object.

It is experience that teaches me that the variation of colour is an effect of spherical convexity, and of the distribution of light and shade. But so rapid is the progress of the thought, from the effect to the cause, that we attend only to the last, and can hardly be persuaded that we do not immediately see the three dimensions of the sphere.

Nay, it may be observed, that, in this case, the acquired perception in a manner effaces the original one; for the sphere is seen to be of one uniform colour, though originally there

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there would have appeared a gradual variation of colour: But that apparent variation, we learn to interpret as the effect of light and ſhade falling upon a ſphere of one uniform colour.

A ſphere may be painted upon a plane, ſo exactly, as to be taken for a real ſphere, when the eye is at a proper diſtance, and in the proper point of view. We ſay in this caſe, that the eye is deceived, that the appearance is fallacious: But there is no fallacy in the original perception, but only in that which is acquired by cuſtom. The variation of colour, exhibited to the eye by the painter's art, is the ſame which Nature exhibits by the different degrees of light falling upon the convex ſurface of a ſphere.

In perception, whether original or acquired, there is ſomething which may be called the ſign, and ſomething which is ſignified to us, or brought to our knowledge by that ſign.

In original perception, the ſigns are the various ſenſations which are produced by the impreſſions made upon our organs. The things ſignified, are the objects perceived in conſequence of thoſe ſenſations, by the original conſtitution of our nature.

Thus, when I graſp an ivory ball in my hand, I have a certain ſenſation of touch. Although this ſenſation be in the mind, and have no ſimilitude to any thing material, yet, by the laws of my conſtitution, it is immediately followed by the conception and belief, that there is in my hand a hard ſmooth body of a ſpherical figure, and about an inch and a half

half in diameter. This belief is grounded neither upon reaſoning, nor upon experience; it is the immediate effect of my conſtitution, and this I call original perception. CHAP. XXI.

In acquired perception, the ſign may be either a ſenſation, or ſomething originally perceived. The thing ſignified, is ſomething, which, by experience, has been found connected with that ſign.

Thus, when the ivory ball is placed before my eye, I perceive by ſight what I before perceived by touch, that the ball is ſmooth, ſpherical, of ſuch a diameter, and at ſuch a diſtance from the eye; and to this is added the perception of its colour. All theſe things I perceive by ſight diſtinctly, and with certainty: Yet it is certain from principles of philoſophy, that if I had not been accuſtomed to compare the informations of ſight with thoſe of touch, I ſhould not have perceived theſe things by ſight. I ſhould have perceived a circular object, having its colour gradually more faint towards the ſhaded ſide. But I ſhould not have perceived it to have three dimenſions, to be ſpherical, to be of ſuch a linear magnitude, and at ſuch a diſtance from the eye. That theſe laſt mentioned are not original perceptions of ſight, but acquired by experience, is ſufficiently evident from the principles of optics, and from the art of painters, in painting objects of three dimenſions, upon a plane which has only two. And it has been put beyond all doubt, by obſervations recorded of ſeveral perſons, who having, by cataracts in their eyes, been deprived of ſight from their infancy, have been couched and made to ſee, after they came to years of underſtanding.

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Thoſe who have had their eyeſight from infancy, acquire ſuch perceptions ſo early, that they cannot recollect the time when they had them not, and therefore make no diſtinction between them and their original perceptions; nor can they be eaſily perſuaded, that there is any juſt foundation for ſuch a diſtinction. In all languages men ſpeak with equal aſſurance of their ſeeing objects to be ſpherical or cubical, as of their feeling them to be ſo; nor do they ever dream, that theſe perceptions of ſight were not as early and original as the perceptions they have of the ſame objects by touch.

This power which we acquire of perceiving things by our ſenſes, which originally we ſhould not have perceived, is not the effect of any reaſoning on our part: It is the reſult of our conſtitution, and of the ſituations in which we happen to be placed.

We are ſo made, that when two things are found to be conjoined in certain circumſtances, we are prone to believe that they are connected by nature, and will always be found together in like circumſtances. The belief which we are led into in ſuch caſes is not the effect of reaſoning, nor does it ariſe from intuitive evidence in the thing believed; it is, as I apprehend, the immediate effect of our conſtitution: Accordingly it is ſtrongeſt in infancy, before our reaſoning power appears, before we are capable of drawing a concluſion from premiſes. A child who has once burnt his finger in a candle, from that ſingle inſtance connects the pain of burning with putting his finger in the candle, and believes that theſe two things muſt go together. It is obvious, that

that this part of our conſtitution is of very great uſe before we come to the uſe of reaſon, and guards us from a thouſand miſchiefs, which, without it, we would ruſh into; it may ſometimes lead us into error, but the good effects of it far overbalance the ill. CHAP. XXI.

It is, no doubt, the perfection of a rational being to have no belief but what is grounded on intuitive evidence, or on juſt reaſoning: But man, I apprehend, is not ſuch a being; nor is it the intention of Nature that he ſhould be ſuch a being, in every period of his exiſtence. We come into the world without the exerciſe of reaſon; we are merely animal before we are rational creatures; and it is neceſſary for our preſervation, that we ſhould believe many things before we can reaſon. How then is our belief to be regulated before we have reaſon to regulate it? has Nature left it to be regulated by chance? By no means. It is regulated by certain principles, which are parts of our conſtitution; whether they ought to be called animal principles, or inſtinctive principles, or what name we give to them, is of ſmall moment; but they are certainly different from the faculty of reaſon: They do the office of reaſon while it is in its infancy, and muſt as it were be carried in a nurſe's arms, and they are leading ſtrings to it in its gradual progreſs.

From what has been ſaid, I think it appears, that our original powers of perceiving objects by our ſenſes receive great improvement by uſe and habit; and without this improvement, would be altogether inſufficient for the purpoſes of life. The daily occurrences of life not only add to our ſtock of knowledge, but give additional perceptive powers to our ſenſes; and

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time gives us the use of our eyes and ears, as well as of our hands and legs.

This is the greatest and most important improvement of our external senses. It is to be found in all men come to years of understanding, but is various in different persons according to their different occupations, and the different circumstances in which they are placed. Every artist acquires an eye as well as a hand in his own profession: His eye becomes skilled in perceiving, no less than his hand in executing, what belongs to his employment.

Besides this improvement of our senses which nature produces without our intention, there are various ways in which they may be improved, or their defects remedied by art. As, *first*, by a due care of the organs of sense that they be in a sound and natural state. This belongs to the department of the Medical Faculty.

Secondly, By accurate attention to the objects of sense. The effects of such attention in improving our senses appear in every art. The artist by giving more attention to certain objects than others do, by that means perceives many things in those objects which others do not. Those who happen to be deprived of one sense, frequently supply that defect in a great degree, by giving more accurate attention to the objects of the senses they have. The blind have often been known to acquire uncommon acuteness in distinguishing things by feeling and hearing; and the deaf are uncommonly quick in reading mens thoughts in their countenance.

A *third* way in which our senses admit of improvement, is, by additional organs or instruments contrived by art. By the invention of optical glasses, and the gradual improvement of

of them, the natural power of viſion is wonderfully improved, and a vaſt addition made to the ſtock of knowledge which we acquire by the eye. By ſpeaking trumpets, and ear trumpets, ſome improvement has been made in the ſenſe of hearing. Whether by ſimilar inventions the other ſenſes may be improved, ſeems uncertain.

A *fourth* method by which the information got by our ſenſes may be improved, is, by diſcovering the connection which Nature hath eſtabliſhed between the ſenſible qualities of objects and their more latent qualities.

By the ſenſible qualities of bodies, I underſtand thoſe that are perceived immediately by the ſenſes, ſuch as their colour, figure, feeling, ſound, taſte, ſmell. The various modifications, and various combinations of theſe, are innumerable; ſo that there are hardly two individual bodies in Nature that may not be diſtinguiſhed by their ſenſible qualities.

The latent qualities are ſuch as are not immediately diſcovered by our ſenſes; but diſcovered, ſometimes by accident, ſometimes by experiment or obſervation. The moſt important part of our knowledge of bodies, is the knowledge of the latent qualities of the ſeveral ſpecies, by which they are adapted to certain purpoſes, either for food, or medicine, or agriculture, or for the materials or utenſils of ſome art or manufacture.

I am taught, that certain ſpecies of bodies have certain latent qualities; but how ſhall I know that this individual is of ſuch a ſpecies? This muſt be known by the ſenſible qualities which characteriſe the ſpecies. I muſt know that this is bread, and that wine, before I eat

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the one or drink the other. I muſt know that this is rhubarb, and that opium, before I uſe the one or the other for medicine.

It is one branch of human knowledge to know the name of the various ſpecies of natural and artificial bodies, and to know the ſenſible qualities by which they are aſcertained to be of ſuch a ſpecies, and by which they are diſtinguiſhed from one another. It is another branch of knowledge to know the latent qualities of the ſeveral ſpecies, and the uſes to which they are ſubſervient.

The man who poſſeſſes both theſe branches, is informed by his ſenſes of innumerable things of real moment, which are hid from thoſe who poſſeſs only one, or neither. This is an improvement in the information got by our ſenſes, which muſt keep pace with the improvements made in natural hiſtory, in natural philoſophy, and in the arts.

It would be an improvement ſtill higher, if we were able to diſcover any connection between the ſenſible qualities of bodies and their latent qualities, without knowing the ſpecies, or what may have been diſcovered with regard to it.

Some Philoſophers of the firſt rate have made attempts towards this noble improvement, not without promiſing hopes of ſucceſs. Thus the celebrated LINNÆUS has attempted to point out certain ſenſible qualities by which a plant may very probably be concluded to be poiſonous, without knowing its name or ſpecies. He has given ſeveral other inſtances, wherein certain medical and œconomical virtues of plants are indicated by their external appearances. Sir ISAAC NEWTON hath attempted to ſhow, that

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from the colours of bodies we may form a probable conjecture of the size of their constituent parts, by which the rays of light are reflected. CHAP. XXI.

No man can pretend to set limits to the discoveries that may be made by human genius and industry, of such connections between the latent and the sensible qualities of bodies. A wide field here opens to our view, whose boundaries no man can ascertain, of improvements that may hereafter be made in the information conveyed to us by our senses.

CHAP. XXII.

Of the Fallacy of the Senses.

COMPLAINTS of the fallacy of the senses have been very common in ancient and in modern times, especially among the Philosophers: And if we should take for granted all that they have said on this subject, the natural conclusion from it might seem to be, that the senses are given to us by some malignant Dæmon on purpose to delude us, rather than that they are formed by the wise and beneficent Author of Nature, to give us true information of things necessary to our preservation and happiness.

The whole sect of Atomists among the ancients, led by DEMOCRITUS, and afterwards by EPICURUS maintained, that all the qualities of bodies which the moderns calls secondary qualities, to wit, smell, taste, sound, colour, heat and cold, are mere illusions of sense, and have no real existence. PLATO maintained that we can

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can attain no real knowledge of material things; and that eternal and immutable ideas are the only objects of real knowledge. The Academies and Sceptics anxiously sought for arguments to prove the fallaciousness of our senses, in order to support their favourite doctrine, that even in things that seem most evident, we ought to with-hold assent.

Among the Peripatetics we find frequent complaints that the senses often deceive us, and that their testimony is to be suspected, when it is not confirmed by reason, by which the errors of sense may be corrected. This complaint they supported by many common-place instances; such as, the crooked appearance of an oar in water; objects being magnified, and their distance mistaken in a fog; the sun and moon appearing about a foot or two in diameter, while they are really thousands of miles; a square tower being taken at a distance to be round. These, and many similar appearances, they thought to be sufficiently accounted for from the fallacy of the senses: And thus the fallacy of the senses was used as a decent cover to conceal their ignorance of the real causes of such phænomena, and served the same purpose as their occult qualities and substantial forms.

Des Cartes and his followers joined in the same complaint. Antony le Grand, a Philosopher of that sect, in the first chapter of his Logic, expresses the sentiments of the sect as follows: "Since all our senses are fallacious, and we are frequently deceived by "them, common reason advises, that we "should not put too much trust in them, nay, "that we should suspect falsehood in every "thing

" thing they repreſent; for it is imprudence " and temerity to truſt to thoſe who have but " once deceived us; and if they err at any " time, they may be believed always to err. " They are given by Nature for this purpoſe " only, to warn us of what is uſeful and what " is hurtful to us. The order of Nature is " perverted when we put them to any other " uſe, and apply them for the knowledge of " truth."

When we conſider, that the active part of mankind, in all ages from the beginning of the world, have reſted their moſt important concerns upon the teſtimony of ſenſe, it will be very difficult to reconcile their conduct with the ſpeculative opinion ſo generally entertained of the fallaciouſneſs of the ſenſes. And it ſeems to be a very unfavourable account of the workmanſhip of the Supreme Being, to think that he has given us one faculty to deceive us, to wit, our ſenſes, and another faculty, to wit, our reaſon, to detect the fallacy.

It deſerves, therefore, to be conſidered, whether the fallaciouſneſs of our ſenſes be not a common error, which men have been led into, from a deſire to conceal their ignorance, or to apologiſe for their miſtakes.

There are two powers which we owe to our external ſenſes, ſenſation, and the perception of external objects.

It is impoſſible that there can be any fallacy in ſenſation: For we are conſcious of all our ſenſations, and they can neither be any other in their nature, nor greater or leſs in their degree than we feel them. It is impoſſible that a man ſhould be in pain, when he does not feel pain;

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pain; and when he feels pain, it is impoſſible that his pain ſhould not be real, and in its degree what it is felt to be; and the ſame thing may be ſaid of every ſenſation whatſoever. An agreeable or an uneaſy ſenſation may be forgot when it is paſt, but when it is preſent, it can be nothing but what we feel.

If, therefore, there be any fallacy in our ſenſes, it muſt be in the perception of external objects, which we ſhall next conſider.

And here I grant that we can conceive powers of perceiving external objects more perfect than ours, which, poſſibly, beings of a higher order may enjoy. We can perceive external objects only by means of bodily organs; and theſe are liable to various diſorders, which ſometimes affect our powers of perception. The nerves and brain, which are interior organs of perception, are likewiſe liable to diſorders, as every part of the human frame is.

The imagination, the memory, the judging and reaſoning powers, are all liable to be hurt, or even deſtroyed, by diſorders of the body, as well as our powers of perception; but we do not on this account call them fallacious.

Our ſenſes, our memory, and our reaſon, are all limited and imperfect: This is the lot of humanity: But they are ſuch as the Author of our being ſaw to be beſt fitted for us in our preſent ſtate. Superior natures may have intellectual powers which we have not, or ſuch as we have, in a more perfect degree, and leſs liable to accidental diſorders: But we have no reaſon to think that God has given fallacious powers to any of his creatures: This would be

be to think dishonourably of our Maker, and would lay a foundation for universal scepticism. CHAP. XXII.

The appearances commonly imputed to the fallacy of the senses are many, and of different kinds; but I think they may be reduced to the four following classes.

First, Many things called deceptions of the senses are only conclusions rashly drawn from the testimony of the senses. In these cases the testimony of the senses is true, but we rashly draw a conclusion from it, which does not necessarily follow. We are disposed to impute our errors rather to false information than to inconclusive reasoning, and to blame our senses for the wrong conclusions we draw from their testimony.

Thus, when a man has taken a counterfeit guinea for a true one, he says his senses deceived him; but he lays the blame where it ought not to be laid: For we may ask him, Did your senses give a false testimony of the colour, or of the figure, or of the impression? No. But this is all that they testified, and this they testified truly: From these premises you concluded that it was a true guinea, but this conclusion does not follow; you erred therefore, not by relying upon the testimony of sense, but by judging rashly from its testimony: Not only are your senses innocent of this error, but it is only by their information that it can be discovered. If you consult them properly, they will inform you that what you took for a guinea is base metal, or is deficient in weight, and this can only be known by the testimony of sense.

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I remember to have met with a man who thought the argument uſed by Proteſtants againſt the Popiſh doctrine of tranſubſtantiation, from the teſtimony of our ſenſes, inconcluſive; becauſe, ſaid he, inſtances may be given where ſeveral of our ſenſes may deceive us: How do we know then that there may not be caſes wherein they all deceive us, and no ſenſe is left to detect the fallacy? I begged of him to know an inſtance wherein ſeveral of our ſenſes deceive us. I take, ſaid he, a piece of ſoft turf, I cut it into the ſhape of an apple; with the eſſence of apples, I give it the ſmell of an apple; and with paint, I can give it the ſkin and colour of an apple. Here then is a body, which, if you judge by your eye, by your touch, or by your ſmell, is an apple.

To this I would anſwer, that no one of our ſenſes deceives us in this caſe. My ſight and touch teſtify that it has the ſhape and colour of an apple: This is true. The ſenſe of ſmelling teſtifies that it has the ſmell of an apple: This is likewiſe true, and is no deception. Where then lies the deception? It is evident it lies in this, that becauſe this body has ſome qualities belonging to an apple, I conclude that it is an apple. This is a fallacy, not of the ſenſes, but of inconcluſive reaſoning.

Many falſe judgments that are accounted deceptions of ſenſe, ariſe from our miſtaking relative motion for real or abſolute motion. Theſe can be no deceptions of ſenſe, becauſe by our ſenſes we perceive only the relative motions of bodies; and it is by reaſoning that we infer the real from the relative which we perceive.

perceive. A little reflection may satisfy us of this. CHAP. XXII.

It was before observed, that we perceive extension to be one sensible quality of bodies, and thence are necessarily led to conceive space, though space be of itself no object of sense. When a body is removed out of its place, the space which it filled remains empty till it is filled by some other body, and would remain if it should never be filled. Before any body existed, the space which bodies now occupy was empty space, capable of receiving bodies; for no body can exist where there is no space to contain it. There is space therefore wherever bodies exist, or can exist.

Hence it is evident that space can have no limits. It is no less evident that it is immoveable. Bodies placed in it are moveable, but the place where they were cannot be moved; and we can as easily conceive a thing to be moved from itself, as one part of space brought nearer to, or removed farther from another.

This space therefore which is unlimited and immoveable, is called by Philosophers *absolute space*. Absolute or real motion is a change of place in absolute space.

Our senses do not testify the absolute motion or absolute rest of any body. When one body removes from another, this may be discerned by the senses; but whether any body keeps the same part of absolute space, we do not perceive by our senses: When one body seems to remove from another, we can infer with certainty that there is absolute motion, but whether in the one or the other, or partly in both, is not discerned by sense.

Of

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Of all the prejudices which philoſophy contradicts, I believe there is none ſo general as that the earth keeps its place unmoved. This opinion ſeems to be univerſal, till it is corrected by inſtruction, or by philoſophical ſpeculation. Thoſe who have any tincture of education are not now in danger of being held by it, but they find at firſt a reluctance to believe that there are antipodes; that the earth is ſpherical, and turns round its axis every day, and round the ſun every year: They can recollect the time when reaſon ſtruggled with prejudice upon theſe points, and prevailed at length, but not without ſome effort.

The cauſe of a prejudice ſo very general is not unworthy of inveſtigation. But that is not our preſent buſineſs. It is ſufficient to obſerve, that it cannot juſtly be called a fallacy of ſenſe; becauſe our ſenſes teſtify only the change of ſituation of one body in relation to other bodies, and not its change of ſituation in abſolute ſpace. It is only the relative motion of bodies that we perceive, and that, we perceive truly. It is the province of reaſon and philoſophy, from the relative motions which we perceive, to collect the real and abſolute motions which produce them.

All motion muſt be eſtimated from ſome point or place which is ſuppoſed to be at reſt. We perceive not the points of abſolute ſpace, from which real and abſolute motion muſt be reckoned: And there are obvious reaſons that lead mankind in the ſtate of ignorance, to make the earth the fixed place from which they may eſtimate the various motions they perceive. The cuſtom of doing this from infancy, and of uſing conſtantly a language which

which ſuppoſes the earth to be at reſt, may perhaps be the cauſe of the general prejudice in favour of this opinion. CHAP. XXII.

Thus it appears, that if we diſtinguiſh accurately between what our ſenſes really and naturally teſtify, and the concluſions which we draw from their teſtimony by reaſoning, we ſhall find many of the errors, called fallacies of the ſenſes, to be no fallacy of the ſenſes, but raſh judgments, which are not to be imputed to our ſenſes.

Secondly, Another claſs of errors imputed to the fallacy of the ſenſes, are thoſe which we are liable to in our acquired perceptions. Acquired perception is not properly the teſtimony of thoſe ſenſes which God hath given us, but a concluſion drawn from what the ſenſes teſtify. In our paſt experience, we have found certain things conjoined with what our ſenſes teſtify. We are led by our conſtitution to expect this conjunction in time to come; and when we have often found it in our experience to happen, we acquire a firm belief, that the things which we have found thus conjoined are connected in nature, and that one is a ſign of the other. The appearance of the ſign immediately produces the belief of its uſual attendant, and we think we perceive the one as well as the other.

That ſuch concluſions are formed even in infancy, no man can doubt; nor is it leſs certain that they are confounded with the natural and immediate perceptions of ſenſe, and in all languages are called by the ſame name. We are therefore authoriſed by language to call them perception, and muſt often do ſo, or ſpeak unintelligibly. But philoſophy teaches us

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us in this, as in many other inſtances, to diſtinguiſh things which the vulgar confound. I have therefore given the name of acquired perception to ſuch concluſions, to diſtinguiſh them from what is naturally, originally, and immediately teſtified by our ſenſes. Whether this acquired perception is to be reſolved into ſome proceſs of reaſoning, of which we have loſt the remembrance, as ſome Philoſophers think, or whether it reſults from ſome part of our conſtitution diſtinct from reaſon, as I rather believe, does not concern the preſent ſubject. If the firſt of theſe opinions be true, the errors of acquired perception will fall under the firſt claſs before mentioned. If not, it makes a diſtinct claſs by itſelf. But whether the one or the other be true, it muſt be obſerved, that the errors of acquired perception are not properly fallacies of our ſenſes.

Thus when a globe is ſet before me, I perceive by my eyes that it has three dimenſions and a ſpherical figure. To ſay that this is not perception, would be to reject the authority of cuſtom in the uſe of words, which no wiſe man will do: But that it is not the teſtimony of my ſenſe of ſeeing, every Philoſopher knows. I ſee only a circular form, having the light and colour diſtributed in a certain way over it. But being accuſtomed to obſerve this diſtribution of light and colour only in a ſpherical body, I immediately, from what I ſee, believe the object to be ſpherical, and ſay that I ſee or perceive it to be ſpherical. When a painter, by an exact imitation of that diſtribution of light and colour, which I have been accuſtomed to ſee only in a real ſphere, deceives me, ſo as to make me take that to be a real ſphere, which

which is only a painted one, the teſtimony of my eye is true; the colour and viſible figure of the object is truly what I ſee it to be: The error lies in the concluſion drawn from what I ſee, to wit, that the object has three dimenſions and a ſpherical figure. The concluſion is falſe in this caſe; but whatever be the origin of this concluſion, it is not properly the teſtimony of ſenſe. CHAP. XXII.

To this claſs we muſt refer the judgments we are apt to form of the diſtance and magnitude of the heavenly bodies, and of terreſtrial objects ſeen on high. The miſtakes we make of the magnitude and diſtance of objects ſeen through optical glaſſes, or through an atmoſphere uncommonly clear, or uncommonly foggy, belong likewiſe to this claſs.

The errors we are led into in acquired perception are very rarely hurtful to us in the conduct of life; they are gradually corrected by a more enlarged experience, and a more perfect knowledge of the laws of Nature: And the general laws of our conſtitution, by which we are ſometimes led into them, are of the greateſt utility.

We come into the world ignorant of every thing, and by our ignorance expoſed to many dangers and to many miſtakes. The regular train of cauſes and effects, which Divine Wiſdom has eſtabliſhed, and which directs every ſtep of our conduct in advanced life, is unknown, until it is gradually diſcovered by experience.

We muſt learn much from experience before we can reaſon, and therefore muſt be liable to many errors. Indeed, I apprehend, that, in the firſt part of life, reaſon would do us much

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more hurt than good. Were we ſenſible of our condition in that period, and capable of reflecting upon it, we ſhould be like a man in the dark, ſurrounded with dangers, where every ſtep he takes may be into a pit. Reaſon would direct him to ſit down, and wait till he could ſee about him.

In like manner, if we ſuppoſe an infant endowed with reaſon, it would direct him to do nothing, till he knew what could be done with ſafety. This he can only know by experiment, and experiments are dangerous. Reaſon directs, that experiments that are full of danger ſhould not be made without a very urgent cauſe. It would therefore make the infant unhappy, and hinder his improvement by experience.

Nature has followed another plan. The child, unapprehenſive of danger, is led by inſtinct to exert all his active powers, to try every thing without the cautious admonitions of reaſon, and to believe every thing that is told him. Sometimes he ſuffers by his raſhneſs what reaſon would have prevented: But his ſuffering proves a ſalutary diſcipline, and makes him for the future avoid the cauſe of it. Sometimes he is impoſed upon by his credulity; but it is of infinite benefit to him upon the whole. His activity and credulity are more uſeful qualities, and better inſtructors than reaſon would be; they teach him more in a day than reaſon would do in a year; they furniſh a ſtock of materials for reaſon to work upon; they make him eaſy and happy in a period of his exiſtence, when reaſon could only ſerve to ſuggeſt a thouſand tormenting anxieties and fears: And he acts agreeably to the conſtitution and intention of Nature, even when

when he does and believes what reason would not justify. So that the wisdom and goodness of the Author of Nature is no less conspicuous in with-holding the exercise of our reason in this period, than in bestowing it when we are ripe for it. CHAP. XXII.

A third class of errors, ascribed to the fallacy of the senses, proceeds from ignorance of the laws of Nature.

The laws of Nature, (I mean not moral but physical laws) are learned, either from our own experience, or the experience of others, who have had occasion to observe the course of Nature.

Ignorance of those laws, or inattention to them, is apt to occasion false judgments with regard to the objects of sense, especially those of hearing and of sight; which false judgments are often, without good reason, called fallacies of sense.

Sounds affect the ear differently, according as the sounding body is before or behind us, on the right hand or on the left, near or at a great distance. We learn, by the manner in which the sound affects the ear, on what hand we are to look for the sounding body; and in most cases we judge right. But we are sometimes deceived by echos, or by whispering galleries, or speaking trumpets, which return the sound, or alter its direction, or convey it to a distance without diminution.

The deception is still greater, because more uncommon, which is said to be produced by Gastriloquists, that is, persons who have acquired the art of modifying their voice, so that it shall affect the ear of the hearers, as if it came from another person, or from the clouds, or from under the earth.

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I never had the fortune to be acquainted with any of theſe artiſts, and therefore cannot ſay to what degree of perfection the art may have been carried.

I apprehend it to be only ſuch an imperfect imitation as may deceive thoſe who are inattentive, or under a panic. For if it could be carried to perfection, a Gaſtriloquiſt would be as dangerous a man in ſociety as was the ſhepherd GIGES, who, by turning a ring upon his finger, could make himſelf inviſible, and by that means, from being the King's ſhepherd, became King of Lydia.

If the Gaſtriloquiſts have all been too good men to uſe their talent to the detriment of others, it might at leaſt be expected that ſome of them ſhould apply it to their own advantage. If it could be brought to any conſiderable degree of perfection, it ſeems to be as proper an engine for drawing money by the exhibition of it, as legerdemain or rope-dancing. But I have never heard of any exhibition of this kind, and therefore am apt to think that it is too coarſe an imitation to bear exhibition even to the vulgar.

Some are ſaid to have the art of imitating the voice of another ſo exactly, that in the dark they might be taken for the perſon whoſe voice they imitate. I am apt to think, that this art alſo, in the relations made of it, is magnified beyond the truth, as wonderful relations are apt to be, and that an attentive ear would be able to diſtinguiſh the copy from the original.

It is indeed a wonderful inſtance of the accuracy as well as of the truth of our ſenſes, in things that are of real uſe in life, that we are able

able to diſtinguiſh all our acquaintance by their countenance, by their voice, and by their hand-writing, when at the ſame time we are often unable to ſay by what minute difference the diſtinction is made; and that we are ſo very rarely deceived in matters of this kind, when we give proper attention to the informations of ſenſe.

However, if any caſe ſhould happen, in which ſounds produced by different cauſes are not diſtinguiſhable by the ear, this may prove that our ſenſes are imperfect, but not that they are fallacious. The ear may not be able to draw the juſt concluſion, but it is only our ignorance of the laws of ſound that leads us to a wrong concluſion.

Deceptions of ſight, ariſing from ignorance of the laws of Nature, are more numerous, and more remarkable than thoſe of hearing.

The rays of light, which are the means of ſeeing, paſs in right lines from the object to the eye, when they meet with no obſtruction; and we are by Nature led to conceive the viſible object to be in the direction of the rays that come to the eye. But the rays may be reflected, refracted, or inflected in their paſſage from the object to the eye, according to certain fixed laws of Nature, by which means their direction may be changed, and conſequently the apparent place, figure, or magnitude of the object.

Thus a child ſeeing himſelf in a mirror, thinks he ſees another child behind the mirror, that imitates all his motions. But even a child ſoon gets the better of this deception, and knows that he ſees himſelf only.

All the deceptions made by teleſcopes, microſcopes, camera obſcuras, magic lanthorns, are

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are of the ſame kind, though not ſo familiar to the vulgar. The ignorant may be deceived by them; but to thoſe who are acquainted with the principles of optics, they give juſt and true information, and the laws of Nature by which they are produced are of infinite benefit to mankind.

There remains another claſs of errors, commonly called deceptions of ſenſe, and the only one, as I apprehend, to which that name can be given with propriety: I mean ſuch as proceed from ſome diſorder or preternatural ſtate, either of the external organ, or of the nerves and brain, which are internal organs of perception.

In a delirium, or in madneſs, perception, memory, imagination, and our reaſoning powers, are ſtrangely diſordered and confounded. There are likewiſe diſorders which affect ſome of our ſenſes, while others are ſound. Thus, a man may feel pain in his toes after the leg is cut off. He may feel a little ball double by croſſing his fingers. He may ſee an object double, by not directing both eyes properly to it. By preſſing the ball of his eye, he may ſee colours that are not real. By the jaundice in his eyes, he may miſtake colours. Theſe are more properly deceptions of ſenſe than any of the claſſes before mentioned.

We muſt acknowledge it to be the lot of human nature, that all the human faculties are liable, by accidental cauſes, to be hurt and unfitted for their natural functions, either wholly or in part: But as this imperfection is common to them all, it gives no juſt ground for accounting any of them fallacious.

Upon

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Upon the whole, it ſeems to have been a common error of Philoſophers to account the ſenſes fallacious. And to this error they have added another, that one uſe of reaſon is to detect the fallacies of ſenſe.

It appears, I think, from what has been ſaid, that there is no more reaſon to account our ſenſes fallacious, than our reaſon, our memory, or any other faculty of judging which nature hath given us. They are all limited and imperfect; but wiſely ſuited to the preſent condition of man. We are liable to error and wrong judgment in the uſe of them all; but as little in the informations of ſenſe as in the deductions of reaſoning. And the errors we fall into with regard to objects of ſenſe are not corrected by reaſon, but by more accurate attention to the informations we may receive by our ſenſes themſelves.

Perhaps the pride of Philoſophers may have given occaſion to this error. Reaſon is the faculty wherein they aſſume a ſuperiority to the unlearned. The informations of ſenſe are common to the Philoſopher and to the moſt illiterate: They put all men upon a level; and therefore are apt to be undervalued. We muſt, however, be beholden to the informations of ſenſe for the greateſt and moſt intereſting part of our knowledge. The wiſdom of Nature has made the moſt uſeful things moſt common, and they ought not to be deſpiſed on that account. Nature likewiſe forces our belief in thoſe informations, and all the attempts of philoſophy to weaken it are fruitleſs and vain.

I add only one obſervation to what has been ſaid upon this ſubject. It is, that there ſeems

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ſeems to be a contradiction between what Philoſophers teach concerning ideas, and their doctrine of the fallaciouſneſs of the ſenſes. We are taught that the office of the ſenſes is only to give us the ideas of external objects. If this be ſo, there can be no fallacy in the ſenſes. Ideas can neither be true nor falſe. If the ſenſes teſtify nothing, they cannot give falſe teſtimony. If they are not judging faculties, no judgment can be imputed to them, whether falſe or true. There is, therefore, a contradiction between the common doctrine concerning ideas and that of the fallaciouſneſs of the ſenſes. Both may be falſe, as I believe they are, but both cannot be true.

ESSAY III.

OF MEMORY.

CHAP. I.

Things obvious and certain with regard to Memory.

IN the gradual progreſs of man, from infancy to maturity, there is a certain order in which his faculties are unfolded, and this ſeems to be the beſt order we can follow in treating of them.

The external ſenſes appear firſt; memory ſoon follows, which we are now to conſider.

It is by memory that we have an immediate knowledge of things paſt: The ſenſes give us information of things only as they exiſt in the preſent moment; and this information, if it were not preſerved by memory, would vaniſh inſtantly, and leave us as ignorant as if it had never been.

Memory muſt have an object. Every man who remembers muſt remember ſomething, and that which he remembers is called the object of his remembrance. In this, memory agrees with perception, but differs from ſenſation, which has no object but the feeling itſelf.

Every man can diſtinguiſh the thing remembered from the remembrance of it. We may remember

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remember any thing which we have ſeen, or heard, or known, or done, or ſuffered; but the remembrance of it is a particular act of the mind which now exiſts, and of which we are conſcious. To confound theſe two is an abſurdity, which a thinking man could not be led into, but by ſome falſe hypotheſis which hinders him from reflecting upon the thing which he would explain by it.

In memory we do not find ſuch a train of operations connected by our conſtitution as in perception. When we perceive an object by our ſenſes, there is, firſt, ſome impreſſion made by the object upon the organ of ſenſe, either immediately or by means of ſome medium. By this an impreſſion is made upon the nerves and brain, in conſequence of which we feel ſome ſenſation; and that ſenſation is attended by that conception and belief of the external object which we call perception. Theſe operations are ſo connected in our conſtitution, that it is difficult to disjoin them in our conceptions, and to attend to each without confounding it with the others. But in the operations of memory we are free from this embarraſſment; they are eaſily diſtinguiſhed from all other acts of the mind, and the names which denote them are free from all ambiguity.

The object of memory, or thing remembered, muſt be ſomething that is paſt; as the object of perception and of conſciouſneſs muſt be ſomething which is preſent: What now is, cannot be an object of memory; neither can that which is paſt and gone be an object of perception or of conſciouſneſs.

Memory

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Memory is always accompanied with the belief of that which we remember, as perception is accompanied with the belief of that which we perceive, and conſciouſneſs with the belief of that whereof we are conſcious. Perhaps in infancy, or in a diſorder of mind, things remembered may be confounded with thoſe which are merely imagined; but in mature years, and in a ſound ſtate of mind, every man feels that he muſt believe what he diſtinctly remembers, though he can give no other reaſon of his belief, but that he remembers the thing diſtinctly; whereas, when he merely imagines a thing ever ſo diſtinctly, he has no belief of it upon that account.

This belief, which we have from diſtinct memory, we account real knowledge, no leſs certain than if it was grounded on demonſtration; no man in his wits calls it in queſtion, or will hear any argument againſt it. The teſtimony of witneſſes in cauſes of life and death depends upon it, and all the knowledge of mankind of paſt events is built on this foundation.

There are caſes in which a man's memory is leſs diſtinct and determinate, and where he is ready to allow that it may have failed him; but this does not in the leaſt weaken its credit, when it is perfectly diſtinct.

Memory implies a conception and belief of paſt duration; for it is impoſſible that a man ſhould remember a thing diſtinctly, without believing ſome interval of duration, more or leſs, to have paſſed between the time it happened, and the preſent moment; and I think it is impoſſible to ſhow how we could acquire a notion of duration if we had no memory.

Things remembered muſt be things formerly perceived or known. I remember the tranſit of

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of Venus over the ſun in the year 1769. I muſt therefore have perceived it at the time it happened, otherwiſe I could not now remember it. Our firſt acquaintance with any object of thought cannot be by remembrance. Memory can only produce a continuance or renewal of a former acquaintance with the thing remembered.

The remembrance of a paſt event is neceſſarily accompanied with the conviction of our own exiſtence at the time the event happened.

I cannot remember a thing that happened a year ago, without a conviction as ſtrong as memory can give, that I, the ſame identical perſon who now remember that event, did then exiſt.

What I have hitherto ſaid concerning memory, I conſider as principles which appear obvious and certain to every man who will take the pains to reflect upon the operations of his own mind. They are facts of which every man muſt judge by what he feels; and they admit of no other proof but an appeal to every man's own reflection. I ſhall therefore take them for granted in what follows, and ſhall firſt draw ſome concluſions from them, and then examine the theories of Philoſophers concerning memory, and concerning duration, and our perſonal identity, of which we acquire the knowledge by memory.

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CHAP. II.

Memory an original Faculty.

FIRST, I think it appears that memory is an original faculty given us by the Author of our being, of which we can give no account, but that we are ſo made.

The knowledge which I have of things paſt by my memory, ſeems to me as unaccountable as an immediate knowledge would be of things to come; and I can give no reaſon why I ſhould have the one and not the other, but that ſuch is the will of my Maker. I find in my mind a diſtinct conception and a firm belief of a ſeries of paſt events; but how this is produced I know not. I call it memory, but this is only giving a name to it; it is not an account of its cauſe. I believe moſt firmly what I diſtinctly remember; but I can give no reaſon of this belief. It is the inſpiration of the Almighty that gives me this underſtanding.

When I believe the truth of a mathematical axiom, or of a mathematical propoſition, I ſee that it muſt be ſo: Every man who has the ſame conception of it ſees the ſame. There is a neceſſary and an evident connection between the ſubject and the predicate of the propoſition; and I have all the evidence to ſupport my belief which I can poſſibly conceive.

When I believe that I waſhed my hands and face this morning, there appears no neceſſity in the truth of this propoſition. It might be, or it might not be. A man may diſtinctly conceive it without believing it at all. How then do

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do I come to believe it? I remember it distinctly. This is all I can say. This remembrance is an act of my mind. Is it impossible that this act should be, if the event had not happened? I confess I do not see any necessary connection between the one and the other. If any man can show such a necessary connection, then I think that belief which we have of what we remember will be fairly accounted for; but if this cannot be done, that belief is unaccountable, and we can say no more but that it is the result of our constitution.

Perhaps it may be said, that the experience we have had of the fidelity of memory is a good reason for relying upon its testimony. I deny not that this may be a reason to those who have had this experience, and who reflect upon it. But I believe there are few who ever thought of this reason, or who found any need of it. It must be some very rare occasion that leads a man to have recourse to it; and in those who have done so, the testimony of memory was believed before the experience of its fidelity; and that belief could not be caused by the experience which came after it.

We know some abstract truths, by comparing the terms of the proposition which expresses them, and perceiving some necessary relation or agreement between them. It is thus I know that two and three make five; that the diameters of a circle are all equal. Mr. Locke having discovered this source of knowledge, too rashly concluded that all human knowledge might be derived from it; and in this he has been followed very generally; by Mr. Hume in particular.

But

But I apprehend, that our knowledge of the existence of things contingent can never be traced to this source. I know that such a thing exists, or did exist. This knowledge cannot be derived from the perception of a necessary agreement between existence and the thing that exists, because there is no such necessary agreement; and therefore no such agreement can be perceived either immediately, or by a chain of reasoning. The thing does not exist necessarily, but by the will and power of him that made it; and there is no contradiction follows from supposing it not to exist. CHAP.

Whence I think it follows, that our knowledge of the existence of our own thoughts, of the existence of all the material objects about us, and of all past contingencies, must be derived, not from a perception of necessary relations or agreements, but from some other source.

Our Maker has provided other means for giving us the knowledge of these things; means which perfectly answer their end, and produce the effect intended by them. But in what manner they do this, is, I fear, beyond our skill to explain. We know our own thoughts, and the operations of our minds, by a power which we call consciousness; But this is only giving a name to this part of our frame. It does not explain its fabric, nor how it produces in us an irresistible conviction of its informations. We perceive material objects and their sensible qualities by our senses; but how they give us this information, and how they produce our belief in it, we know not. We know many past events by memory; but how it gives this information, I believe, is inexplicable.

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CHAP. II.

It is well known what ſubtile diſputes were held through all the ſcholaſtic ages, and are ſtill carried on about the preſcience of the Deity. ARISTOTLE had taught, that there can be no certain foreknowledge of things contingent; and in this he has been very generally followed, upon no other grounds, as I apprehend, but that we cannot conceive how ſuch things ſhould be foreknown, and therefore conclude it to be impoſſible. Hence has ariſen an oppoſition and ſuppoſed inconſiſtency between Divine preſcience and human liberty. Some have given up the firſt in favour of the laſt, and others have given up the laſt in order to ſupport the firſt.

It is remarkable, that theſe diſputants have never apprehended that there is any difficulty in reconciling with liberty the knowledge of what is paſt, but only of what is future. It is preſcience only, and not memory, that is ſuppoſed to be hoſtile to liberty, and hardly reconcileable to it.

Yet I believe the difficulty is perfectly equal in the one caſe and in the other. I admit, that we cannot account for preſcience of the actions of a free agent. But I maintain that we can as little account for memory of the paſt actions of a free agent. If any man thinks he can prove that the actions of a free agent cannot be foreknown, he will find the ſame arguments of equal force to prove that the paſt actions of a free agent cannot be remembered. It is true, that what is paſt did certainly exiſt. It is no leſs true, that what is future will certainly exiſt. I know no reaſoning from the conſtitution of the agent, or from his circumſtances, that has not equal ſtrength, whether it be applied

plied to his paſt or to his future actions. The paſt was, but now is not. The future will be, but now is not. The preſent is equally connected, or unconnected with both. CHAP. II.

The only reaſon why men have apprehended ſo great diſparity in caſes ſo perfectly like, I take to be this, That the faculty of memory in ourſelves convinces us from fact, that it is not impoſſible that an intelligent being, even a finite being, ſhould have certain knowledge of paſt actions of free agents, without tracing them from any thing neceſſarily connected with them. But having no preſcience in ourſelves correſponding to our memory of what is paſt, we find great difficulty in admitting it to be poſſible even in the Supreme Being.

A faculty which we poſſeſs in ſome degree, we eaſily admit that the Supreme Being may poſſeſs in a more perfect degree; but a faculty, which has nothing correſponding to it in our conſtitution, we will hardly allow to be poſſible. We are ſo conſtituted as to have an intuitive knowledge of many things paſt; but we have no intuitive knowledge of the future. We might perhaps have been ſo conſtituted as to have an intuitive knowledge of the future, but not of the paſt; nor would this conſtitution have been more unaccountable than the preſent, though it might be much more inconvenient. Had this been our conſtitution, we ſhould have found no difficulty in admitting that the Deity may know all things future, but very much in admitting his knowledge of things that are paſt.

Our original faculties are all unaccountable. Of theſe memory is one. He only who made them, comprehends fully how they are made,

CHAP. II. and how they produce in us not only a conception, but a firm belief and assurance of things which it concerns us to know.

CHAP. III.

Of Duration.

FROM the principles laid down in the first chapter of this Essay, I think it appears, that our notion of duration, as well as our belief of it, is got by the faculty of memory. It is essential to every thing remembered that it be something which is past; and we cannot conceive a thing to be past, without conceiving some duration, more or less, between it and the present. As soon therefore as we remember any thing, we must have both a notion and a belief of duration. It is necessarily suggested by every operation of our memory; and to that faculty it ought to be ascribed. This is therefore a proper place to consider what is known concerning it.

Duration, extension, and number, are the measures of all things subject to mensuration. When we apply them to finite things which are measured by them, they seem of all things to be the most distinctly conceived, and most within the reach of human understanding.

Extension having three dimensions, has an endless variety of modifications, capable of being accurately defined; and their various relations furnish the human mind with its most ample field of demonstrative reasoning. Duration having only one dimension, has fewer modifications; but these are clearly understood; and

and their relations admit of meaſure, propor- CHAP. II.
tion, and demonſtrative reaſoning.

Number is called diſcrete quantity, becauſe it is compounded of units, which are all equal and ſimilar, and it can only be divided into units. This is true, in ſome ſenſe, even of fractions of unity, to which we now commonly give the name of number. For in every fractional number the unit is ſuppoſed to be ſubdivided into a certain number of equal parts, which are the units of that denomination, and the fractions of that denomination are only diviſible into units of the ſame denomination. Duration and extenſion are not diſcrete, but continued quantity. They conſiſt of parts perfectly ſimilar, but diviſible without end.

In order to aid our conception of the magnitude and proportions of the various intervals of duration, we find it neceſſary to give a name to ſome known portion of it, ſuch as an hour, a day, a year. Theſe we conſider as units, and by the number of them contained in a larger interval, we form a diſtinct conception of its magnitude. A ſimilar expedient we find neceſſary to give us a diſtinct conception of the magnitudes and proportions of things extended. Thus, number is found neceſſary, as a common meaſure of extenſion and duration. But this perhaps is owing to the weakneſs of our underſtanding. It has even been diſcovered, by the ſagacity of Mathematicians, that this expedient does not in all caſes anſwer its intention. For there are proportions of continued quantity, which cannot be perfectly expreſſed by numbers; ſuch as that between the diagonal and ſide of a ſquare, and many others.

CHAP. III.

The parts of duration have to other parts of it the relations of prior and posterior, and to the present they have the relations of past and future. The notion of past is immediately suggested by memory, as has been before observed. And when we have got the notions of present and past, and of prior and posterior, we can from these frame a notion of the future; for the future is that which is posterior to the present. Nearness and distance are relations equally applicable to time and to place. Distance in time, and distance in place, are things so different in their nature, and so like in their relation, that it is difficult to determine whether the name of distance is applied to both in the same or an analogical sense.

The extension of bodies which we perceive by our senses, leads us necessarily to the conception and belief of a space which remains immoveable when the body is removed. And the duration of events which we remember leads us necessarily to the conception and belief of a duration, which would have gone on uniformly, though the event had never happened.

Without space there can be nothing that is extended. And without time there can be nothing that hath duration. This I think undeniable. And yet we find that extension and duration are not more clear and intelligible than space and time are dark and difficult objects of contemplation.

As there must be space wherever any thing extended does or can exist, and time when there is or can be any thing that has duration, we can set no bounds to either, even in our imagination. They defy all limitation. The

one

one ſwells in our conception to immenſity, the other to eternity. CHAP. III.

An eternity paſt is an object which we cannot comprehend; but a beginning of time, unleſs we take it in a figurative ſenſe, is a contradiction. By a common figure of ſpeech, we give the name of time to thoſe motions and revolutions by which we meaſure it, ſuch as days and years. We can conceive a beginning of theſe ſenſible meaſures of time, and ſay that there was a time when they were not, a time undiſtinguiſhed by any motion or change; but to ſay that there was a time before all time, is a contradiction.

All limited duration is comprehended in time, and all limited extenſion in ſpace. Theſe, in their capacious womb, contain all finite exiſtences, but are contained by none. Created things have their particular place in ſpace, and their particular place in time; but time is every where, and ſpace at all times. They embrace each the other, and have that myſterious union which the ſchoolmen conceived between ſoul and body. The whole of each is in every part of the other.

We are at a loſs to what category or claſs of things we ought to refer them. They are not beings, but rather the receptacles of every created being, without which it could not have had the poſſibility of exiſtence. Philoſophers have endeavoured to reduce all the objects of human thought to theſe three claſſes, of ſubſtances, modes, and relations. To which of them ſhall we refer time, ſpace and number, the moſt common objects of thought?

Sir

CHAP. III.

Sir ISAAC NEWTON thought, that the Deity, by exiſting every where, and at all times, conſtitutes time and ſpace, immenſity and eternity. This probably ſuggeſted to his great friend Dr. CLARKE what he calls the argument *a priori* for the exiſtence of an immenſe and eternal Being. Space and time, he thought, are only abſtract or partial conceptions of an immenſity and eternity, which forces itſelf upon our belief. And as immenſity and eternity are not ſubſtances, they muſt be the attributes of a Being who is neceſſarily immenſe and eternal. Theſe are the ſpeculations of men of ſuperior genius. But whether they be as ſolid as they are ſublime, or whether they be the wanderings of imagination in a region beyond the limits of human underſtanding, I am unable to determine.

The ſchoolmen made eternity to be a *nunc ſtans*, that is, a moment of time that ſtands ſtill. This was to put a ſpoke into the wheel of time, and might give ſatisfaction to thoſe who are to be ſatisfied by words without meaning. But I can as eaſily believe a circle to be a ſquare as time to ſtand ſtill.

Such paradoxes and riddles, if I may ſo call them, men are involuntarily led into when they reaſon about time and ſpace, and and attempt to comprehend their nature. They are probably things of which the human faculties give an imperfect and inadequate conception. Hence difficulties ariſe which we in vain attempt to overcome, and doubts which we are unable to reſolve. Perhaps ſome faculty which we poſſeſs not, is neceſſary to remove the darkneſs which hangs over them, and makes us ſo apt to bewilder ourſelves when we reaſon about them.

CHAP.

CHAP. IV.

Of Identity.

THE conviction which every man has of his identity, as far back as his memory reaches, needs no aid of philoſophy to ſtrengthen it, and no philoſophy can weaken it, without firſt producing ſome degree of infanity.

The Philoſopher, however, may very prudently conſider this conviction as a phænomenon of human nature worthy of his attention. If he can diſcover its cauſe, an addition is made to his ſtock of knowledge: If not, it muſt be held as part of our original conſtitution, or an effect of that conſtitution produced in a manner unknown to us.

We may obſerve, firſt of all, that this conviction is indiſpenſably neceſſary to all exerciſe of reaſon. The operations of reaſon, whether in action or in ſpeculation, are made up of ſucceſſive parts. The antecedent are the foundation of the conſequent, and without the conviction that the antecedent have been ſeen or done by me, I could have no reaſon to proceed to the conſequent, in any ſpeculation, or in any active project whatever.

There can be no memory of what is paſt without the conviction that we exiſted at the time remembered. There may be good arguments to convince me that I exiſted before the earlieſt thing I can remember; but to ſuppoſe that my memory reaches a moment farther

CHAP. IV.

farther back than my belief and conviction of my exiſtence, is a contradiction.

The moment a man loſes this conviction, as if he had drunk the water of Lethe, paſt things are done away; and, in his own belief, he then begins to exiſt. Whatever was thought, or ſaid, or done, or ſuffered, before that period, may belong to ſome other perſon; but he can never impute it to himſelf, or take any ſubſequent ſtep that ſuppoſes it to be his doing.

From this it is evident, that we muſt have the conviction of our own continued exiſtence and identity, as ſoon as we are capable of thinking or doing any thing, on account of what we have thought, or done, or ſuffered before; that is, as ſoon as we are reaſonable creatures.

That we may form as diſtinct a notion as we are able of this phænomenon of the human mind, it is proper to conſider what is meant by identity in general, what by our own perſonal identity, and how we are led into that invincible belief and conviction which every man has of his own perſonal identity, as far as his memory reaches.

Identity in general, I take to be a relation between a thing which is known to exiſt at one time, and a thing which is known to have exiſted at another time. If you aſk whether they are one and the ſame, or two different things, every man of common ſenſe underſtands the meaning of your queſtion perfectly. Whence we may infer with certainty, that every man of common ſenſe has a clear and diſtinct notion of identity.

If

If you ask a definition of identity, I confess I can give none; it is too simple a notion to admit of logical definition: I can say it is a relation, but I cannot find words to express the specific difference between this and other relations, though I am in no danger of confounding it with any other. I can say that diversity is a contrary relation, and that similitude and dissimilitude are another couple of contrary relations, which every man easily distinguishes in his conception from identity and diversity.

I see evidently that identity supposes an uninterrupted continuance of existence. That which hath ceased to exist, cannot be the same with that which afterwards begins to exist; for this would be to suppose a being to exist after it ceased to exist, and to have had existence before it was produced, which are manifest contradictions. Continued uninterrupted existence is therefore necessarily implied in identity.

Hence we may infer, that identity cannot, in its proper sense, be applied to our pains, our pleasures, or thoughts, or any operation of our minds. The pain felt this day is not the same individual pain which I felt yesterday, though they may be similar in kind and degree, and have the same cause. The same may be said of every feeling, and of every operation of mind: They are all successive in their nature like time itself, no two moments of which can be the same moment.

It is otherwise with the parts of absolute space. They always are, and were, and will be the same. So far, I think, we proceed upon clear ground in fixing the notion of identity in general.

CHAP. IV.

It is perhaps more difficult to aſcertain with preciſion the meaning of perſonality; but it is not neceſſary in the preſent ſubject: It is ſufficient for our purpoſe to obſerve, that all mankind place their perſonality in ſomething that cannot be divided, or conſiſt of parts. A part of a perſon is a manifeſt abſurdity.

When a man loſes his eſtate, his health, his ſtrength, he is ſtill the ſame perſon, and has loſt nothing of his perſonality. If he has a leg or an arm cut off, he is the ſame perſon he was before. The amputated member is no part of his perſon, otherwiſe it would have a right to a part of his eſtate, and be liable for a part of his engagements: It would be entitled to a ſhare of his merit and demerit, which is manifeſtly abſurd. A perſon is ſomething indiviſible, and is what LEIBNITZ calls a *monad*.

My perſonal identity, therefore, implies the continued exiſtence of that indiviſible thing which I call myſelf. Whatever this ſelf may be, it is ſomething which thinks, and deliberates, and reſolves, and acts, and ſuffers. I am not thought, I am not action, I am not feeling; I am ſomething that thinks, and acts, and ſuffers. My thoughts, and actions, and feelings, change every moment; they have no continued, but a ſucceſſive exiſtence; but that *ſelf* or *I*, to which they belong, is permanent, and has the ſame relation to all the ſucceeding thoughts, actions, and feelings, which I call mine.

Such are the notions that I have of my perſonal identity. But perhaps it may be ſaid, this may all be fancy without reality. How do you know; what evidence have you, that there is ſuch a permanent ſelf which has a claim to all the thoughts, actions, and feelings, which you call yours?

To

CHAP. IV.

To this I anſwer, that the proper evidence I have of all this is remembrance. I remember that twenty years ago I converſed with ſuch a perſon; I remember ſeveral things that paſſed in that converſation; my memory teſtifies not only that this was done, but that it was done by me who now remember it: If it was done by me, I muſt have exiſted at that time, and continued to exiſt from that time to the preſent: If the identical perſon whom I call myſelf, had not a part in that converſation, my memory is fallacious; it gives a diſtinct and poſitive teſtimony of what is not true. Every man in his ſenſes believes what he diſtinctly remembers, and every thing he remembers convinces him that he exiſted at the time remembered.

Although memory gives the moſt irreſiſtible evidence of my being the identical perſon that did ſuch a thing, at ſuch a time, I may have other good evidence of things which befel me, and which I do not remember: I know who bare me, and ſuckled me, but I do not remember theſe events.

It may here be obſerved, (though the obſervation would have been unneceſſary, if ſome great Philoſophers had not contradicted it) that it is not my remembering any action of mine that makes me to be the perſon who did it. This remembrance makes me to know aſſuredly that I did it; but I might have done it, though I did not remember it. That relation to me, which is expreſſed by ſaying that I did it, would be the ſame, though I had not the leaſt remembrance of it. To ſay that my remembering that I did ſuch a thing, or, as ſome chuſe to expreſs it, my being conſcious that I did

CHAP. IV.

did it, makes me to have done it, appears to me as great an abſurdity as it would be to ſay, that my belief that the world was created, made it to be created.

When we paſs judgment on the identity of other perſons beſides ourſelves, we proceed upon other grounds, and determine from a variety of circumſtances, which ſometimes produce the firmeſt aſſurance, and ſometimes leave room for doubt. The identity of perſons has often furniſhed matter of ſerious litigation before tribunals of juſtice. But no man of a ſound mind ever doubted of his own identity, as far as he diſtinctly remembered.

The identity of a perſon is a perfect identity; wherever it is real, it admits of no degrees; and it is impoſſible that a perſon ſhould be in part the ſame, and in part different; becauſe a perſon is a *monad*, and is not diviſible into parts. The evidence of identity in other perſons beſides ourſelves, does indeed admit of all degrees, from what we account certainty, to the leaſt degree of probability. But ſtill it is true, that the ſame perſon is perfectly the ſame, and cannot be ſo in part, or in ſome degree only.

For this cauſe, I have firſt conſidered perſonal identity, as that which is perfect in its kind, and the natural meaſure of that which is imperfect.

We probably at firſt derive our notion of identity from that natural conviction which every man has from the dawn of reaſon of his own identity and continued exiſtence. The operations of our minds are all ſucceſſive, and have no continued exiſtence. But the thinking being has a continued exiſtence, and we have

have an invincible belief, that it remains the same when all its thoughts and operations change. CHAP. IV.

Our judgments of the identity of objects of ſenſe ſeem to be formed much upon the ſame grounds as our judgments of the identity of other perſons beſides ourſelves.

Wherever we obſerve great ſimilarity, we are apt to preſume identity, if no reaſon appears to the contrary. Two objects ever ſo like, when they are perceived at the ſame time, cannot be the ſame: But if they are preſented to our ſenſes at different times, we are apt to think them the ſame, merely from their ſimilarity.

Whether this be a natural prejudice, or from whatever cauſe it proceeds, it certainly appears in children from infancy; and, when we grow up, it is confirmed in moſt inſtances by experience: For we rarely find two individuals of the ſame ſpecies that are not diſtinguiſhable by obvious differences.

A man challenges a thief whom he finds in poſſeſſion of his horſe or his watch, only on ſimilarity. When the watch-maker ſwears that he ſold this watch to ſuch a perſon, his teſtimony is grounded on ſimilarity. The teſtimony of witneſſes to the identity of a perſon is commonly grounded on no other evidence.

Thus it appears, that the evidence we have of our own identity, as far back as we remember, is totally of a different kind from the evidence we have of the identity of other perſons, or of objects of ſenſe. The firſt is grounded on memory, and gives undoubted certainty. The laſt is grounded on ſimilarity, and on other circumſtances, which in many caſes are not ſo deciſive as to leave no room for doubt.

It

CHAP. IV.

It may likewiſe be obſerved, that the identity of objects of ſenſe is never perfect. All bodies, as they conſiſt of innumerable parts that may be disjoined from them by a great variety of cauſes, are ſubject to continual changes of their ſubſtance, increaſing, diminiſhing, changing inſenſibly. When ſuch alterations are gradual, becauſe language could not afford a different name for every different ſtate of ſuch a changeable being, it retains the ſame name, and is conſidered as the ſame thing. Thus we ſay of an old regiment, that it did ſuch a thing a century ago, though there now is not a man alive who then belonged to it. We ſay a tree is the ſame in the ſeed-bed and in the foreſt. A ſhip of war, which has ſucceſſively changed her anchors, her tackle, her ſails, her maſts, her planks, and her timbers, while ſhe keeps the ſame name, is the ſame.

The identity therefore which we aſcribe to bodies, whether natural or artificial, is not perfect identity; it is rather ſomething, which, for the conveniency of ſpeech, we call identity. It admits of a great change of the ſubject, providing the change be gradual, ſometimes even of a total change. And the changes which in common language are made conſiſtent with identity, differ from thoſe that are thought to deſtroy It, not in kind, but in number and degree. It has no fixed nature when applied to bodies; and queſtions about the identity of a body are very often queſtions about words. But identity, when applied to perſons, has no ambiguity, and admits not of degrees, or of more and leſs: It is the foundation of all rights and obligations, and of all accountableneſs; and the notion of it is fixed and preciſe.

CHAP.

CHAP. V.

Mr. LOCKE's *Account of the Origin of our Ideas, and particularly of the Idea of Duration.*

IT was a very laudable attempt of Mr. LOCKE "to enquire into the original of thoſe ideas, "notions, or whatever you pleaſe to call them, "which a man obſerves, and is conſcious to "himſelf he has in his mind, and the ways "whereby the underſtanding comes to be fur-"niſhed with them." No man was better qualified for this inveſtigation; and I believe no man ever engaged in it with a more ſincere love of truth.

His ſucceſs, though great, would, I apprehend, have been greater, if he had not too early formed a ſyſtem or hypotheſis upon this ſubject, without all the caution and patient induction, which is neceſſary in drawing general concluſions from facts.

The ſum of his doctrine I take to be this, "That all our ideas or notions may be reduced to two claſſes, the ſimple and the complex: That the ſimple are purely the work of Nature, the underſtanding being merely paſſive in receiving them: That they are all ſuggeſted by two powers of the mind, to wit, ſenſation and reflection; and that they are the materials of all our knowledge. That the other claſs of complex ideas are formed by the underſtanding itſelf, which being once ſtored with ſimple ideas of ſenſation and reflection, has the power to repeat, to compare, and to combine them even to an almoſt infinite variety, and ſo can make at

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at pleaſure new complex ideas: But that it is not in the power of the moſt exalted wit, or enlarged underſtanding, by any quickneſs or variety of thought, to invent or frame one new ſimple idea in the mind, not taken in by the two ways before mentioned. That as our power over the material world reaches only to the compounding, dividing, and putting together, in various forms, the matter which God has made, but reaches not to the production or annihilation of a ſingle atom; ſo we may compound, compare, and abſtract the original and ſimple ideas which Nature has given us; but are unable to faſhion in our underſtanding any ſimple idea, not received in by our ſenſes from external objects, or by reflection from the operations of our own mind about them."

This account of the origin of all our ideas is adopted by Biſhop BERKELEY and Mr. HUME; but ſome very ingenious Philoſophers, who have a high eſteem of LOCKE's Eſſay, are diſſatisfied with it.

Dr. HUTCHESON of Glaſgow, in his Enquiry into the Ideas of Beauty and Virtue, has endeavoured to ſhow that theſe are original and ſimple ideas, furniſhed by original powers, which he calls the ſenſe of beauty and the moral ſenſe.

Dr. PRICE, in his Review of the Principal Queſtions and Difficulties in Morals, has obſerved very juſtly, that if we take the words *ſenſation* and *reflection*, as Mr. LOCKE has defined them in the beginning of his excellent Eſſay, it will be impoſſible to derive ſome of the moſt important of our ideas from them; and that, by the underſtanding, that is by our judging

judging and reaſoning power, we are furniſhed with many ſimple and original notions. CHAP V.

Mr. LOCKE ſays, that, by reflection, he would be underſtood to mean "the notice "which the mind takes of its own operations, "and the manner of them." This, I think, we commonly call conſciouſneſs; from which, indeed, we derive all the notions we have of the operations of our own minds; and he often ſpeaks of the operations of our own minds, as the only objects of reflection.

When reflection is taken in this confined ſenſe, to ſay, that all our ideas are ideas either of ſenſation or reflection, is to ſay, that every thing we can conceive is either ſome object of ſenſe, or ſome operation of our own minds, which is far from being true.

But the word reflection is commonly uſed in a much more extenſive ſenſe; it is applied to many operations of the mind, with more propriety than to that of conſciouſneſs. We reflect, when we remember, or call to mind what is paſt, and ſurvey it with attention. We reflect, when we define, when we diſtinguiſh, when we judge, when we reaſon, whether about things material or intellectual.

When reflection is taken in this ſenſe, which is more common, and therefore more proper than the ſenſe which Mr. LOCKE has put upon it, it may be juſtly ſaid to be the only ſource of all our diſtinct and accurate notions of things. For, although our firſt notions of material things are got by the external ſenſes, and our firſt notions of the operations of our own minds by conſciouſneſs, theſe firſt notions are neither ſimple nor clear. Our ſenſes and our conſciouſneſs are continually ſhifting from one object

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to another; their operations are tranſient and momentary, and leave no diſtinct notion of their objects, until they are recalled by memory, examined with attention, and compared with other things.

This reflection is not one power of the mind; it comprehends many; ſuch as recollection, attention, diſtinguiſhing, comparing, judging. By theſe powers our minds are furniſhed not only with many ſimple and original notions, but with all our notions, which are accurate and well defined, and which alone are the proper materials of reaſoning. Many of theſe, are neither notions of the objects of ſenſe, nor of the operations of our own minds, and therefore neither ideas of ſenſation, nor of reflection, in the ſenſe that Mr. LOCKE gives to reflection. But if any one chuſes to call them ideas of reflection, taking the word in the more common and proper ſenſe, I have no objection.

Mr. LOCKE ſeems to me to have uſed the word reflection ſometimes in that limited ſenſe which he has given to it in the definition before mentioned, and ſometimes to have fallen unawares into the common ſenſe of the word; and by this ambiguity his account of the origin of our ideas is darkened and perplexed.

Having premiſed theſe things in general of Mr. LOCKE's theory of the origin of our ideas or notions, I proceed to ſome obſervations on his account of the idea of duration.

"Reflection, he ſays, upon the train of "ideas, which appear one after another in "our minds, is that which furniſhes us with "the idea of ſucceſſion; and the diſtance be-

"tween

"tween any two parts of that ſucceſſion, is "that we call duration." CHAP. V.

If it be meant that the idea of ſucceſſion is prior to that of duration, either in time, or in the order of nature, this, I think, is impoſſible, becauſe ſucceſſion, as Dr. PRICE juſtly obſerves, pre-ſuppoſes duration, and can in no ſenſe be prior to it; and therefore it would be more proper to derive the idea of ſucceſſion from that of duration.

But how do we get the idea of ſucceſſion? It is, ſays he, by reflecting upon the train of ideas, which appear one after another in our minds.

Reflecting upon the train of ideas can be nothing but remembering it, and giving attention to what our memory teſtifies concerning it; for if we did not remember it, we could not have a thought about it. So that it is evident that this reflection includes remembrance, without which there could be no reflection on what is paſt, and conſequently no idea of ſucceſſion.

It may here be obſerved, that if we ſpeak ſtrictly and philoſophically, no kind of ſucceſſion can be an object either of the ſenſes, or of conſciouſneſs; becauſe the operations of both are confined to the preſent point of time, and there can be no ſucceſſion in a point of time; and on that account the motion of a body, which is a ſucceſſive change of place, could not be obſerved by the ſenſes alone without the aid of memory.

As this obſervation ſeems to contradict the common ſenſe and common language of mankind, when they affirm that they ſee a body

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move, and hold motion to be an object of the ſenſes, it is proper to take notice, that this contradiction between the Philoſopher and the vulgar is apparent only, and not real. It ariſes from this, that Philoſophers and the vulgar differ in the meaning they put upon what is called the *preſent* time, and are thereby led to make a different limit between ſenſe and memory.

Philoſophers give the name of the *preſent* to that indiviſible point of time, which divides the future from the paſt: But the vulgar find it more convenient in the affairs of life, to give the name of *preſent* to a portion of time, which extends more or leſs, according to circumſtances, into the paſt or the future. Hence we ſay, the preſent hour, the preſent year, the preſent century, though one point only of theſe periods can be preſent in the philoſophical ſenſe.

It has been obſerved by Grammarians, that the preſent tenſe in verbs is not confined to an indiviſible point of time, but is ſo far extended as to have a beginning, a middle, and an end; and that in the moſt copious and accurate languages, theſe different parts of the preſent are diſtinguiſhed by different forms of the verb.

As the purpoſes of converſation make it convenient to extend what is called the preſent, the ſame reaſon leads men to extend the province of ſenſe, and to carry its limit as far back as they carry the preſent. Thus a man may ſay, I ſaw ſuch a perſon juſt now; it would be ridiculous to find fault with this way of ſpeaking, becauſe it is authoriſed by cuſtom, and has a diſtinct meaning: But if we ſpeak philo-

philoſophically, the ſenſes do not teſtify what we ſaw, but only what we ſee; what I ſaw laſt moment I conſider as the teſtimony of ſenſe, though it is now only the teſtimony of memory. CHAP. V.

There is no neceſſity in common life of dividing accurately the provinces of ſenſe and of memory; and therefore we aſſign to ſenſe, not an indiviſible point of time, but that ſmall portion of time which we call the preſent, which has a beginning, a middle, and an end.

Hence it is eaſy to ſee, that though in common language we ſpeak with perfect propriety and truth, when we ſay, that we ſee a body move, and that motion is an object of ſenſe, yet when as Philoſophers we diſtinguiſh accurately the province of ſenſe from that of memory, we can no more ſee what is paſt, though but a moment ago, than we can remember what is preſent; ſo that ſpeaking philoſophically, it is only by the aid of memory that we diſcern motion, or any ſucceſſion whatſoever: We ſee the preſent place of the body; we remember the ſucceſſive advance it made to that place: The firſt can then only give us a conception of motion, when joined to the laſt.

Having conſidered the account given by Mr. LOCKE, of the idea of ſucceſſion, we ſhall next conſider how, from the idea of ſucceſſion, he derives the idea of duration.

"The diſtance, he ſays, between any parts "of that ſucceſſion, or between the appear- "ance of any two ideas in our minds, is that "we call duration."

To conceive this the more diſtinctly, let us call the diſtance between an idea and that which

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which immediately ſucceeds it, one element of duration; the diſtance between an idea and the ſecond that ſucceeds it, two elements, and ſo on: If ten ſuch elements make duration, then one muſt make duration, otherwiſe duration muſt be made up of parts that have no duration, which is impoſſible.

For, ſuppoſe a ſucceſſion of as many ideas as you pleaſe, if none of theſe ideas have duration, nor any interval of duration be between one and another, then it is perfectly evident there can be no interval of duration between the firſt and the laſt, how great ſoever their number be. I conclude therefore, that there muſt be duration in every ſingle interval or element of which the whole duration is made up. Nothing indeed is more certain than that every elementary part of duration muſt have duration, as every elementary part of extenſion muſt have extenſion.

Now it muſt be obſerved, that in theſe elements of duration, or ſingle intervals of ſucceſſive ideas, there is no ſucceſſion of ideas, yet we muſt conceive them to have duration; whence we may conclude with certainty, that there is a conception of duration, where there is no ſucceſſion of ideas in the mind.

We may meaſure duration by the ſucceſſion of thoughts in the mind, as we meaſure length by inches or feet; but the notion or idea of duration muſt be antecedent to the menſuration of it, as the notion of length is antecedent to its being meaſured.

Mr. LOCKE draws ſome concluſions from his account of the idea of duration, which may ſerve as a touchſtone to diſcover how far it is genuine. One is, that if it were poſſible for

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for a waking man to keep only one idea in his mind without variation, or the ſucceſſion of others, he would have no perception of duration at all; and the moment he began to have this idea, would ſeem to have no diſtance from the moment he ceaſed to have it.

Now that one idea ſhould ſeem to have no duration, and that a multiplication of that *no duration* ſhould ſeem to have duration, appears to me as impoſſible as that the multiplication of nothing ſhould produce ſomething.

Another concluſion which the author draws from this theory is, that the ſame period of duration appears long to us, when the ſucceſſion of ideas in our mind is quick, and ſhort when the ſucceſſion is ſlow.

There can be no doubt but the ſame length of duration appears in ſome circumſtances much longer than in others; the time appears long when a man is impatient under any pain or diſtreſs, or when he is eager in the expectation of ſome happineſs: On the other hand, when he is pleaſed and happy in agreeable converſation, or delighted with a variety of agreeable objects that ſtrike his ſenſes, or his imagination, time flies away, and appears ſhort.

According to Mr. LOCKE's theory, in the firſt of theſe caſes, the ſucceſſion of ideas is very quick, and in the laſt very ſlow: I am rather inclined to think that the very contrary is the truth. When a man is racked with pain, or with expectation, he can hardly think of any thing but his diſtreſs; and the more his mind is occupied by that ſole object, the longer the time appears. On the other hand, when he is entertained with cheerful muſic, with lively converſation, and briſk ſallies of wit, there ſeems

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ſeems to be the quickeſt ſucceſſion of ideas, but the time appears ſhorteſt.

I have heard a military officer, a man of candour and obſervation, ſay, that the time he was engaged in hot action always appeared to him much ſhorter than it really was. Yet I think it cannot be ſuppoſed, that the ſucceſſion of ideas was then ſlower than uſual.

If the idea of duration were got merely by the ſucceſſion of ideas in our minds, that ſucceſſion muſt to ourſelves appear equally quick at all times, becauſe the only meaſure of duration is the number of ſucceeding ideas; but I believe every man capable of reflection will be ſenſible, that at one time his thoughts come ſlowly and heavily, and at another time have a much quicker and livelier motion.

I know of no ideas or notions that have a better claim to be accounted ſimple and original than thoſe of ſpace and time. It is eſſential both to ſpace and time to be made up of parts, but every part is ſimilar to the whole, and of the ſame nature. Different parts of ſpace, as it has three dimenſions, may differ both in figure and in magnitude; but time having only one dimenſion, its parts can differ only in magnitude; and, as it is one of the ſimpleſt objects of thought, the conception of it muſt be purely the effect of our conſtitution, and given us by ſome original power of the mind.

The ſenſe of ſeeing, by itſelf, gives us the conception and belief of only two dimenſions of extenſion, but the ſenſe of touch diſcovers three; and reaſon, from the contemplation of finite extended things, leads us neceſſarily to the belief of an immenſity that contains them. In like manner, memory gives us the conception

tion and belief of finite intervals of duration. From the contemplation of theſe, reaſon leads us neceſſarily to the belief of an eternity, which comprehends all things that have a beginning and an end. Our conceptions, both of ſpace and time, are probably partial and inadequate, and therefore we are apt to loſe ourſelves, and to be embarraſſed in our reaſonings about them.

Our underſtanding is no leſs puzzled when we conſider the minuteſt parts of time and ſpace than when we conſider the whole. We are forced to acknowledge, that in their nature they are diviſible without end or limit; but there are limits beyond which our faculties can divide neither the one nor the other.

It may be determined by experiment, what is the leaſt angle under which an object may be diſcerned by the eye, and what is the leaſt interval of duration that may be diſcerned by the ear. I believe theſe may be different in different perſons: But ſurely there is a limit which no man can exceed: And what our faculties can no longer divide is ſtill diviſible in itſelf, and, by beings of ſuperior perfection, may be divided into thouſands of parts.

I have reaſon to believe, that a good eye in the prime of life may ſee an object under an angle not exceeding half a minute of a degree, and I believe there are ſome human eyes ſtill more perfect. But even this degree of perfection will appear great, if we conſider how ſmall a part of the retina of the eye it muſt be which ſubtends an angle of half a minute.

Suppoſing the diſtance between the centre of the eye and the retina to be ſix or ſeven tenths of an inch, the ſubtenſe of an angle of half

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half a minute to that radius, or the breadth of the image of an object ſeen under that angle, will not be above the ten thouſandth part of an inch. This ſhews ſuch a wonderful degree of accuracy in the refracting power of a good eye, that a pencil of rays coming from one point of the object ſhall meet in one point of the retina, ſo as not to deviate from that point the ten thouſandth part of an inch. It ſhews, likewiſe, that ſuch a motion of an object as makes its image on the retina to move the ten thouſandth part of an inch, is diſcernible by the mind.

In order to judge to what degree of accuracy we can meaſure ſhort intervals of time, it may be obſerved, that one who has given attention to the motion of a Second pendulum, will be able to beat ſeconds for a minute with a very ſmall error. When he continues this exerciſe long, as for five or ten minutes, he is apt to err, more even than in proportion to the time, for this reaſon, as I apprehend, that it is difficult to attend long to the moments as they paſs, without wandering after ſome other object of thought.

I have found, by ſome experiments, that a man may beat ſeconds for one minute, without erring above one ſecond in the whole ſixty; and I doubt not but by long practice he might do it ſtill more accurately. From this I think it follows, that the ſixtieth part of a ſecond of time is diſcernible by the human mind.

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Of Mr. LOCKE'S *Account of our perſonal Identity.*

IN a long chapter upon identity and diverſity, Mr. LOCKE has made many ingenious and juſt obſervations, and ſome which I think cannot be defended. I ſhall only take notice of the account he gives of our own perſonal identity. His doctrine upon this ſubject has been cenſured by Biſhop BUTLER, in a ſhort eſſay ſubjoined to his Analogy, with whoſe ſentiments I perfectly agree.

Identity, as was obſerved chap. 4. of this Eſſay, ſuppoſes the continued exiſtence of the being of which it is affirmed, and therefore can be applied only to things which have a continued exiſtence. While any being continues to exiſt, it is the ſame being; but two beings which have a different beginning or a different ending of their exiſtence, cannot poſſibly be the ſame. To this I think Mr. LOCKE agrees.

He obſerves very juſtly, that to know what is meant by the ſame perſon, we muſt conſider what the word *perſon* ſtands for; and he defines a perſon to be an intelligent being, endowed with reaſon, and with conſciouſneſs, which laſt he thinks inſeparable from thought.

From this definition of a perſon, it muſt neceſſarily follow, that while the intelligent being continues to exiſt and to be intelligent, it muſt be the ſame perſon. To ſay that the intelligent being

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being is the perſon, and yet that the perſon ceaſes to exiſt, while the intelligent being continues, or that the perſon continues while the intelligent being ceaſes to exiſt, is to my apprehenſion a manifeſt contradiction.

One would think that the definition of a perſon ſhould perfectly aſcertain the nature of perſonal identity, or wherein it conſiſts, though it might ſtill be a queſtion how we come to know and be aſſured of our perſonal identity.

Mr. LOCKE tells us however, "that perſonal identity, that is, the ſameneſs of a rational being, conſiſts in conſciouſneſs alone, and, as far as this conſciouſneſs can be extended backward to any paſt action or thought, ſo far reaches the identity of that perſon. So that whatever hath the conſciouſneſs of preſent and paſt actions, is the ſame perſon to whom they belong."

This doctrine hath ſome ſtrange conſequences, which the author was aware of. Such as, that if the ſame conſciouſneſs can be transferred from one intelligent being to another, which he thinks we cannot ſhew to be impoſſible, then two or twenty intelligent beings may be the ſame perſon. And if the intelligent being may loſe the conſciouſneſs of the actions done by him, which ſurely is poſſible, then he is not the perſon that did thoſe actions; ſo that one intelligent being may be two or twenty different perſons, if he ſhall ſo often loſe the conſciouſneſs of his former actions.

There is another conſequence of this doctrine, which follows no leſs neceſſarily, though Mr. LOCKE probably did not ſee it. It is, that a man

a man may be, and at the ſame time not be, the perſon that did a particular action. CHAP. VI.

Suppoſe a brave officer to have been flogged when a boy at ſchool, for robbing an orchard, to have taken a ſtandard from the enemy in his firſt campaign, and to have been made a general in advanced life: Suppoſe alſo, which muſt be admitted to be poſſible, that when he took the ſtandard, he was conſcious of his having been flogged at ſchool, and that when made a general he was conſcious of his taking the ſtandard, but had abſolutely loſt the conſciouſneſs of his flogging.

Theſe things being ſuppoſed, it follows, from Mr. LOCKE's doctrine, that he who was flogged at ſchool is the ſame perſon who took the ſtandard, and that he who took the ſtandard is the ſame perſon who was made a general. Whence it follows, if there be any truth in logic, that the general is the ſame perſon with him who was flogged at ſchool. But the general's conſciouſneſs does not reach ſo far back as his flogging, therefore, according to Mr. LOCKE's doctrine, he is not the perſon who was flogged. Therefore the general is, and at the ſame time is not the ſame perſon with him who was flogged at ſchool.

Leaving the conſequences of this doctrine to thoſe who have leiſure to trace them, we may obſerve, with regard to the doctrine itſelf,

Firſt, that Mr. LOCKE attributes to conſciouſneſs the conviction we have of our paſt actions, as if a man may now be conſcious of what he did twenty years ago. It is impoſſible to underſtand the meaning of this, unleſs by conſciouſneſs be meant memory, the only faculty by which we have an immediate knowledge of our paſt actions.

Sometimes,

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Sometimes, in popular diſcourſe, a man ſays he is conſcious that he did ſuch a thing, meaning that he diſtinctly remembers that he did it. It is unneceſſary, in common diſcourſe, to fix accurately the limits between conſciouſneſs and memory. This was formerly ſhewn to be the caſe with regard to ſenſe and memory: And therefore diſtinct remembrance is ſometimes called ſenſe, ſometimes conſciouſneſs, without any inconvenience.

But this ought to be avoided in philoſophy, otherwiſe we confound the different powers of the mind, and aſcribe to one what really belongs to another. If a man can be conſcious of what he did twenty years or twenty minutes ago, there is no uſe for memory, nor ought we to allow that there is any ſuch faculty. The faculties of conſciouſneſs and memory are chiefly diſtinguiſhed by this, that the firſt is an immediate knowledge of the preſent, the ſecond an immediate knowledge of the paſt.

When, therefore, Mr. Locke's notion of perſonal identity is properly expreſſed, it is, that perſonal identity conſiſts in diſtinct remembrance: For, even in the popular ſenſe, to ſay that I am conſcious of a paſt action, means nothing elſe than that I diſtinctly remember that I did it.

Secondly, It may be obſerved, that, in this doctrine, not only is conſciouſneſs confounded with memory, but, which is ſtill more ſtrange, perſonal identity is confounded with the evidence which we have of our perſonal identity.

It is very true, that my remembrance that I did ſuch a thing is the evidence I have that I am the identical perſon who did it. And this, I am apt to think, Mr. Locke meant: But to ſay that my remembrance that I did ſuch a thing,

thing, or my conſciouſneſs, makes me the perſon who did it, is, in my apprehenſion, an abſurdity too groſs to be entertained by any man who attends to the meaning of it: For it is to attribute to memory or conſciouſneſs a ſtrange magical power of producing its object, though that object muſt have exiſted before the memory or conſciouſneſs which produced it. CHAP. VI.

Conſciouſneſs is the teſtimony of one faculty; memory is the teſtimony of another faculty: And to ſay that the teſtimony is the cauſe of the thing teſtified, this ſurely is abſurd, if any thing be, and could not have been ſaid by Mr. LOCKE, if he had not confounded the teſtimony with the thing teſtified.

When a horſe that was ſtolen is found and claimed by the owner, the only evidence he can have, or that a judge or witneſſes can have that this is the very identical horſe which was his property, is ſimilitude. But would it not be ridiculous from this to infer that the identity of a horſe conſiſts in ſimilitude only? The only evidence I have that I am the identical perſon who did ſuch actions is, that I remember diſtinctly I did them; or, as Mr. LOCKE expreſſes it, I am conſcious I did them. To infer from this, that perſonal identity conſiſts in conſciouſneſs, is an argument, which, if it had any force, would prove the identity of a ſtolen horſe to conſiſt ſolely in ſimilitude.

Thirdly, Is it not ſtrange that the ſameneſs or identity of a perſon ſhould conſiſt in a thing which is continually changing, and is not any two minutes the ſame?

Our conſciouſneſs, our memory, and every operation of the mind, are ſtill flowing like the

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the water of a river, or like time itſelf. The conſciouſneſs I have this moment, can no more be the ſame conſciouſneſs I had laſt moment, than this moment can be the laſt moment. Identity can only be affirmed of things which have a continued exiſtence. Conſciouſneſs, and every kind of thought, is tranſient and momentary, and has no continued exiſtence; and therefore, if perſonal identity conſiſted in conſciouſneſs, it would certainly follow, that no man is the ſame perſon any two moments of his life; and as the right and juſtice of reward and puniſhment is founded on perſonal identity, no man could be reſponſible for his actions.

But though I take this to be the unavoidable conſequence of Mr. LOCKE's doctrine concerning perſonal identity, and though ſome perſons may have liked the doctrine the better on this account, I am far from imputing any thing of this kind to Mr. LOCKE. He was too good a man not to have rejected with abhorrence a doctrine which he believed to draw this conſequence after it.

Fourthly, There are many expreſſions uſed by Mr. LOCKE in ſpeaking of perſonal identity, which to me are altogether unintelligible, unleſs we ſuppoſe that he confounded that ſameneſs or identity, which we aſcribe to an individual, with the identity which in common diſcourſe is often aſcribed to many individuals of the ſame ſpecies.

When we ſay that pain and pleaſure, conſciouſneſs and memory, are the ſame in all men, this ſameneſs can only mean ſimilarity, or ſameneſs of kind; but that the pain of one man can be the ſame individual pain with that of

of another man, is no leſs impoſſible than that one man ſhould be another man; the pain felt by me yeſterday, can no more be the pain I feel to-day, than yeſterday can be this day; and the ſame thing may be ſaid of every paſſion and of every operation of the mind: The ſame kind or ſpecies of operation may be in different men, or in the ſame man at different times; but it is impoſſible that the ſame individual operation ſhould be in different men, or in the ſame man at different times. CHAP. VI.

When Mr. LOCKE therefore ſpeaks of "the "ſame conſciouſneſs being continued through "a ſucceſſion of different ſubſtances;" when he ſpeaks of "repeating the idea of a paſt ac- "tion, with the ſame conſciouſneſs we had of "it at the firſt," and of "the ſame conſciouſ- "neſs extending to actions paſt and to come;" theſe expreſſions are to me unintelligible, unleſs he means not the ſame individual conſciouſneſs, but a conſciouſneſs that is ſimilar, or of the ſame kind.

If our perſonal identity conſiſts in conſciouſneſs, as this conſciouſneſs cannot be the ſame individually any two moments, but only of the ſame kind, it would follow, that we are not for any two moments the ſame individual perſons, but the ſame kind of perſons.

As our conſciouſneſs ſometimes ceaſes to exiſt, as in ſound ſleep, our perſonal identity muſt ceaſe with it. Mr. LOCKE allows, that the ſame thing cannot have two beginnings of exiſtence, ſo that our identity would be irrecoverably gone every time we ceaſe to think, if it was but for a moment.

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Theories concerning Memory.

THE common theory of ideas, that is of images in the brain or in the mind, of all the objects of thought, has been very generally applied to account for the faculties of memory and imagination, as well as that of perception by the ſenſes.

The ſentiments of the Peripatetics are expreſſed by ALEXANDER APHRODISIENSIS, one of the earlieſt Greek Commentators on ARISTOTLE, in theſe words, as they are tranſlated by Mr. HARRIS in his Hermes, "Now what "fancy or imagination is, we may explain as "follows: We may conceive to be formed "within us, from the operations of our ſenſes "about ſenſible objects, ſome impreſſion, as "it were, or picture in our original ſenſorium, "being a relict of that motion cauſed within "us by the external object; a relict, which "when the external object is no longer pre-"ſent, remains, and is ſtill preſerved, being "as it were its image, and which, by being "thus preſerved, becomes the cauſe of our "having memory: Now ſuch a ſort of relict, "and as it were impreſſion, they call fancy or "imagination."

Another paſſage from ALCINOUS *of the doctrine of* PLATO, chap. 4. ſhews the agreement of the ancient Platoniſts and Peripatetics in this theory, "When the form or type of things "is imprinted on the mind by the organs of "the ſenſes, and ſo imprinted as not to be "deleted

" deleted by time, but preſerved firm and " laſting, its preſervation is called memory."

Upon this principle ARISTOTLE imputes the ſhortneſs of memory in children to this cauſe, that their brain is too moiſt and ſoft to retain impreſſions made upon it: And the defect of memory in old men he imputes, on the contrary, to the hardneſs and rigidity of the brain, which hinders its receiving any durable impreſſion.

This ancient theory of the cauſe of memory is defective in two reſpects: *Firſt*, If the cauſe aſſigned did really exiſt, it by no means accounts for the phænomenon: And, *ſecondly*, There is no evidence, nor even probability, that that cauſe exiſts.

It is probable, that in perception ſome impreſſion is made upon the brain as well as upon the organ and nerves, becauſe all the nerves terminate in the brain, and becauſe diſorders and hurts of the brain are found to affect our powers of perception when the external organ and nerve are ſound; but we are totally ignorant of the nature of this impreſſion upon the brain: It can have no reſemblance to the object perceived, nor does it in any degree account for that ſenſation and perception which are conſequent upon it. Theſe things have been argued in the ſecond Eſſay, and ſhall now be taken for granted, to prevent repetition.

If the impreſſion upon the brain be inſufficient to account for the perception of objects that are preſent, it can as little account for the memory of thoſe that are paſt.

So that if it were certain, that the impreſſions made on the brain in perception remain as long as there is any memory of the object; all

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that could be inferred from this is, that, by the laws of Nature, there is a connection eſtabliſhed between that impreſſion, and the remembrance of that object. But how the impreſſion contributes to this remembrance, we ſhould be quite ignorant; it being impoſſible to diſcover how thought of any kind ſhould be produced, by an impreſſion on the brain, or upon any part of the body.

To ſay that this impreſſion is memory, is abſurd, if underſtood literally. If it is only meant that it is the cauſe of memory, it ought to be ſhown how it produces this effect, otherwiſe memory remains as unaccountable as before.

If a Philoſopher ſhould undertake to account for the force of gunpowder, in the diſcharge of a muſket, and then tell us gravely, that the cauſe of this phænomenon is the drawing of the trigger, we ſhould not be much wiſer by this account. As little are we inſtructed in the cauſe of memory, by being told that it is cauſed by a certain impreſſion on the brain. For ſuppoſing, that impreſſion on the brain were as neceſſary to memory as the drawing of the trigger is to the diſcharge of the muſket, we are ſtill as ignorant as we were how memory is produced; ſo that, if the cauſe of memory, aſſigned by this theory, did really exiſt, it does not in any degree account for memory.

Another defect in this theory is, that there is no evidence, nor probability that the cauſe aſſigned does exiſt; that is, that the impreſſion made upon the brain in perception remains after the object is removed.

That impreſſion, whatever be its nature, is cauſed by the impreſſion made by the object upon

upon the organ of ſenſe, and upon the nerve. Philoſophers ſuppoſe, without any evidence, that when the object is removed, and the impreſſion upon the organ and nerve ceaſes, the impreſſion upon the brain continues, and is permanent; that is, that when the cauſe is removed the effect continues. The brain ſurely does not appear more fitted to retain an impreſſion than the organ and nerve. CHAP. VII.

But granting that the impreſſion upon the brain continues after its cauſe is removed, its effects ought to continue while it continues; that is, the ſenſation and perception ſhould be as permanent as the impreſſion upon the brain, which is ſuppoſed to be their cauſe. But here again the Philoſopher makes a ſecond ſuppoſition, with as little evidence, but of a contrary nature, to wit, that, while the cauſe remains, the effect ceaſes.

If this ſhould be granted alſo, a third muſt be made, That the ſame cauſe, which at firſt produced ſenſation and perception, does afterwards produce memory; an operation eſſentially different, both from ſenſation and perception.

A fourth ſuppoſition muſt be made, That this cauſe, though it be permanent, does not produce its effect at all times; it muſt be like an inſcription which is ſometimes covered with rubbiſh, and on other occaſions made legible: For the memory of things is often interrupted for a long time, and circumſtances bring to our recollection what had been long forgot. After all, many things are remembered which were never perceived by the ſenſes, being no objects of ſenſe, and therefore which could make no impreſſion upon the brain by means of the ſenſes.

Thus,

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Thus, when Philoſophers have piled one ſuppoſition upon another, as the giants piled the mountains, in order to ſcale the heavens, all is to no purpoſe, memory remains unaccountable; and we know as little how we remember things paſt, as how we are conſcious of the preſent.

But here it is proper to obſerve, that although impreſſions upon the brain give no aid in accounting for memory, yet it is very probable, that, in the human frame, memory is dependent on ſome proper ſtate or temperament of the brain.

Although the furniture of our memory bears no reſemblance to any temperament of brain whatſoever, as indeed it is impoſſible it ſhould; yet Nature may have ſubjected us to this law, that a certain conſtitution or ſtate of the brain is neceſſary to memory. That this is really the caſe, many well known facts lead us to conclude.

It is poſſible, that, by accurate obſervation, the proper means may be diſcovered of preſerving that temperament of the brain which is favourable to memory, and of remedying the diſorders of that temperament. This would be a very noble improvement of the medical art. But if it ſhould ever be attained, it would give no aid to underſtand how one ſtate of the brain aſſiſts memory, and another hurts it.

I know certainly, that the impreſſion made upon my hand by the prick of a pin occaſions acute pain. But can any Philoſopher ſhow how this cauſe produces the effect? The nature of the impreſſion is here perfectly known; but it gives no help to underſtand how that impreſſion affects the mind; and if we knew as diſtinctly

distinctly that state of the brain which causes memory, we should still be as ignorant as before how that state contributes to memory. We might have been so constituted, for any thing that I know, that the prick of a pin in the hand, instead of causing pain, should cause remembrance; nor would that constitution be more unaccountable than the present.

The body and mind operate on each other, according to fixed laws of Nature; and it is the business of a Philosopher to discover those laws by observation and experiment: But, when he has discovered them, he must rest in them as facts, whose cause is inscrutable to the human understanding.

Mr. LOCKE, and those who have followed him, speak with more reserve than the ancients, and only incidentally, of impressions on the brain as the cause of memory, and impute it rather to our retaining in our minds the ideas, got either by sensation or reflection.

This, Mr. LOCKE says, may be done two ways; "*First*, by keeping the idea for some "time actually in view, which is called *con-* "*templation*. *Secondly*, by the power to re- "vive again in our minds those ideas, which, "after imprinting, have disappeared, or have "been, as it were, laid out of sight; and this "is memory, which is, as it were, the store- "house of our ideas."

To explain this more distinctly, he immediately adds the following observation: "But "our ideas being nothing but actual percep- "tions in the mind, which cease to be any "thing, when there is no perception of them, "this laying up of our ideas in the repository of "the memory, signifies no more but this, that "the

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" the mind has a power, in many cafes, to revive perceptions which it once had, with " this additional perception annexed to them, " that it has had them before; and in this " fenfe it is, that our ideas are faid to be in " our memories, when indeed they are actu- " ally no where; but only there is an ability " in the mind, when it will, to revive them " again, and, as it were, paint them anew " upon itfelf, though fome with more, fome " with lefs difficulty, fome more lively, and " others more obfcurely."

In this account of memory, the repeated ufe of the phrafe, *as it were*, leads one to judge that it is partly figurative; we muft therefore endeavour to diftinguifh the figurative part from the philofophical. The firft being addreffed to the imagination, exhibits a picture of memory, which, to have its effect, muft be viewed at a proper diftance, and from a particular point of view. The fecond being addreffed to the underftanding, ought to bear a near infpection, and a critical examination.

The analogy between memory and a repofitory, and between remembering and retaining, is obvious, and is to be found in all languages, it being very natural to expreſs the operations of the mind by images taken from things material. But in philofophy we ought to draw afide the veil of imagery, and to view them naked.

When therefore memory is faid to be a repofitory or ftore-houfe of ideas, where they are laid up when not perceived, and again brought forth as there is occafion, I take this to be popular and rhetorical. For the author tells us, that when they are not perceived, they

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are nothing, and no where, and therefore can neither be laid up in a repoſitory, nor drawn out of it.

But we are told, "That this laying up of our ideas in the repoſitory of the memory ſignifies no more than this, that the mind has a power to revive perceptions, which it once had, with this additional perception annexed to them, that it has had them before." This I think muſt be underſtood literally and philoſophically.

But it ſeems to me as difficult to revive things that have ceaſed to be any thing, as to lay them up in a repoſitory, or to bring them out of it. When a thing is once annihilated, the ſame thing cannot be again produced, though another thing ſimilar to it may. Mr. LOCKE, in another place, acknowledges, that the ſame thing cannot have two beginnings of exiſtence; and that things that have different beginnings are not the ſame, but diverſe. From this it follows, that an ability to revive our ideas or perceptions, after they have ceaſed to be, can ſignify no more but an ability to create new ideas or perceptions ſimilar to thoſe we had before.

They are ſaid "to be revived, with this additional perception, that we have had them before." This ſurely would be a fallacious perception, ſince they could not have two beginnings of exiſtence; nor could we believe them to have two beginnings of exiſtence. We can only believe, that we had formerly ideas or perceptions very like to them, though not identically the ſame. But whether we perceive them to be the ſame, or only like to thoſe we had before, this perception, one would

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would think, ſuppoſes a remembrance of thoſe we had before, otherwiſe the ſimilitude or identity could not be perceived.

Another phraſe is uſed to explain this reviving of our perceptions. "The mind, as it were, paints them anew upon itſelf." There may be ſomething figurative in this; but making due allowance for that, it muſt imply, that the mind, which paints the things that have ceaſed to exiſt, muſt have the memory of what they were, ſince every painter muſt have a copy either before his eye, or in his imagination and memory.

Theſe remarks upon Mr. LOCKE's account of memory are intended to ſhow, that his ſyſtem of ideas gives no light to this faculty, but rather tends to darken it; as little does it make us underſtand how we remember, and by that means have the certain knowledge of things paſt.

Every man knows what memory is, and has a diſtinct notion of it: But when Mr. LOCKE ſpeaks of a power to revive in the mind thoſe ideas, which, after imprinting, have diſappeared, or have been, as it were, laid out of ſight, one would hardly know this to be memory, if he had not told us. There are other things which it ſeems to reſemble at leaſt as much. I ſee before me the picture of a friend. I ſhut my eyes, or turn them another way; and the picture diſappears, or is, as it were, laid out of ſight. I have a power to turn my eyes again towards the picture, and immediately the perception is revived. But is this memory? no ſurely; yet it anſwers the definition as well as memory itſelf can do.

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We may obſerve, that the word perception is uſed by Mr. LOCKE in too indefinite a way, as well as the word idea.

Perception, in the chapter upon that ſubject, is ſaid to be the firſt faculty of the mind exerciſed about our ideas. Here we are told that ideas are nothing but perceptions: Yet I apprehend it would ſound oddly to ſay, that perception is the firſt faculty of the mind exerciſed about perception; and ſtill more ſtrangely to ſay, that ideas are the firſt faculty of the mind exerciſed about our ideas. But why ſhould not ideas be a faculty as well as perception, if both are the ſame?

Memory is ſaid to be a power to revive our perceptions. Will it not follow from this, that every thing that can be remembered is a perception? If this be ſo, it will be difficult to find any thing in nature but perceptions.

Our ideas, we are told, are nothing but actual perceptions; but in many places of the Eſſay, ideas are ſaid to be the objects of perception, and that the mind, in all its thoughts and reaſonings, has no other immediate object which it does or can contemplate but its own ideas. Does it not appear from this, either that Mr. LOCKE held the operations of the mind to be the ſame thing with the objects of thoſe operations, or that he uſed the word idea ſometimes in one ſenſe and ſometimes in another, without any intimation, and probably without any apprehenſion of its ambiguity? It is an article of Mr. HUME's philoſophy, that there is no diſtinction between the operations of the mind and their objects. But I ſee no reaſon to impute this opinion to Mr. LOCKE. I rather think, that, notwithſtanding his great judgment

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judgment and candour, his underſtanding was entangled by the ambiguity of the word idea, and that moſt of the imperfections of his Eſſay are owing to that cauſe,

Mr. HUME ſaw farther into the conſequences of the common ſyſtem concerning ideas than any author had done before him. He ſaw the abſurdity of making every object of thought double, and ſplitting it into a remote object, which has a ſeparate and permanent exiſtence, and an immediate object, called an idea or impreſſion, which is an image of the former, and has no exiſtence, but when we are conſcious of it. According to this ſyſtem, we have no intercourſe with the external world, but by means of the internal world of ideas, which repreſents the other to the mind.

He ſaw it was neceſſary to reject one of theſe worlds as a fiction, and the queſtion was, Which ſhould be rejected? Whether all mankind, learned and unlearned, had feigned the exiſtence of the external world without good reaſon? or whether Philoſophers had feigned the internal world of ideas, in order to account for the intercourſe of the mind with the external? Mr. HUME adopted the firſt of theſe opinions, and employed his reaſon and eloquence in ſupport of it.

Biſhop BERKELEY had gone ſo far in the ſame track as to reject the material world as fictitious; but it was left to Mr. HUME to complete the ſyſtem.

According to his ſyſtem, therefore, impreſſions and ideas in his own mind are the only things a man can know, or can conceive: Nor are theſe ideas repreſentatives, as they were in the old ſyſtem. There is nothing elſe

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in nature, or at leaſt within the reach of our faculties, to be repreſented. What the vulgar call the perception of an external object, is nothing but a ſtrong impreſſion upon the mind. What we call the remembrance of a paſt event, is nothing but a preſent impreſſion or idea, weaker than the former. And what we call imagination, is ſtill a preſent idea, but weaker than that of memory.

That I may not do him injuſtice, theſe are his words in his Treatiſe of Human Nature, page 193.

"We find by experience, that when any "impreſſion has been preſent with the mind, "it again makes its appearance there as an "idea; and this it may do after two different "ways, either when in its new appearance it "retains a conſiderable degree of its firſt vi- "vacity, and is ſomewhat intermediate betwixt "an impreſſion and an idea, or when it en- "tirely loſes that vivacity, and is a perfect "idea. The faculty by which we repeat our "impreſſions in the firſt manner, is called the "memory, and the other the imagination."

Upon this account of memory and imagination I ſhall make ſome remarks.

Firſt, I wiſh to know, what we are here to underſtand by experience? It is ſaid, we find all this by experience; and I conceive nothing can be meant by this experience but memory. Not that memory which our author defines, but memory in the common acceptation of the word. According to vulgar apprehenſion, memory is an immediate knowledge of ſomething paſt. Our author does not admit that there is any ſuch knowledge in the human mind. He maintains that memory is nothing but a preſent

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preſent idea or impreſſion. But, in defining what he takes memory to be, he takes for granted that kind of memory which he rejects. For can we find by experience, that an impreſſion, after its firſt appearance to the mind, makes a ſecond, and a third, with different degrees of ſtrength and vivacity, if we have not ſo diſtinct a remembrance of its firſt appearance, as enables us to know it, upon its ſecond and third, notwithſtanding that, in the interval, it has undergone a very conſiderable change?

All experience ſuppoſes memory; and there can be no ſuch thing as experience, without truſting to our own memory, or that of others: So that it appears from Mr. HUME's account of this matter, that he found himſelf to have that kind of memory, which he acknowledges and defines, by exerciſing that kind which he rejects.

Secondly, What is it we find by experience or memory? It is, "That when an impreſſion "has been preſent with the mind, it again "makes its appearance there as an idea, and "that after two different ways."

If experience informs us of this, it certainly deceives us; for the thing is impoſſible, and the author ſhews it to be ſo. Impreſſions and ideas are fleeting periſhable things, which have no exiſtence, bnt when we are conſcious of them. If an impreſſion could make a ſecond and a third appearance to the mind, it muſt have a continued exiſtence during the interval of theſe appearances, which Mr. HUME acknowledges to be a groſs abſurdity. It ſeems then, that we find, by experience, a thing

a thing which is impoſſible. We are impoſed upon by our experience, and made to believe contradictions.

Perhaps it may be ſaid, that theſe different appearances of the impreſſion are not to be underſtood literally, but figuratively; that the impreſſion is perſonified, and made to appear at different times, and in different habits, when no more is meant, but that an impreſſion appears at one time; afterwards a thing of a middle nature, between an impreſſion and an idea, which we call memory, and laſt of all a perfect idea, which we call imagination: that this figurative meaning agrees beſt with the laſt ſentence of the period, where we are told, that memory and imagination are faculties, whereby we repeat our impreſſions in a more or leſs lively manner. To repeat an impreſſion is a figurative way of ſpeaking, which ſignifies making a new impreſſion ſimilar to the former.

If, to avoid the abſurdity implied in the literal meaning, we underſtand the Philoſopher in this figurative one, then his definitions of memory and imagination, when ſtripped of the figurative dreſs, will amount to this, That memory is the faculty of making a weak impreſſion, and imagination the faculty of making an impreſſion ſtill weaker, after a correſponding ſtrong one. Theſe definitions of memory and imagination labour under two defects; *firſt*, That they convey no notion of the thing defined; and, *ſecondly*, That they may be applied to things of a quite different nature from thoſe that are defined.

When we are ſaid to have a faculty of making a weak impreſſion after a correſponding ſtrong one, it would not be eaſy to conjecture

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jecture that this faculty is memory. Suppoſe a man ſtrikes his head ſmartly againſt the wall, this is an impreſſion; now he has a faculty by which he can repeat this impreſſion with leſs force, ſo as not to hurt him; this, by Mr. HUME's account, muſt be memory. He has a faculty by which he can juſt touch the wall with his head, ſo that the impreſſion entirely loſes its vivacity. This ſurely muſt be imagination; at leaſt it comes as near to the definition given of it by Mr. HUME as any thing I can conceive.

Thirdly, We may obſerve, that when we are told that we have a faculty of repeating our impreſſions in a more or leſs lively manner, this implies that we are the efficient cauſes of our ideas of memory and imagination; but this contradicts what the author ſays a little before, where he proves, by what he calls a convincing argument, that impreſſions are the cauſe of their correſponding ideas. The argument that proves this had need indeed to be very convincing; whether we make the idea to be a ſecond appearance of the impreſſion, or a new impreſſion ſimilar to the former.

If the firſt be true, then the impreſſion is the cauſe of itſelf. If the ſecond, then the impreſſion after it is gone, and has no exiſtence, produces the idea. Such are the myſteries of Mr. HUME's philoſophy.

It may be obſerved, that the common ſyſtem, that ideas are the only immediate objects of thought, leads to ſcepticiſm with regard to memory, as well as with regard to the objects of ſenſe, whether thoſe ideas are placed in the mind or in the brain.

Ideas

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Ideas are said to be things internal and present, which have no existence but during the moment they are in the mind. The objects of sense are things external, which have a continued existence. When it is maintained, that all that we immediately perceive is only ideas or phantasms, how can we, from the existence of those phantasms, conclude the existence of an external world corresponding to them?

This difficult question seems not to have occurred to the Peripatetics. DES CARTES saw the difficulty, and endeavoured to find out arguments by which, from the existence of our phantasms or ideas, we might infer the existence of external objects. The same course was followed by MALEBRANCHE, ARNAULD, and LOCKE; but BERKELEY and HUME easily refuted all their arguments, and demonstrated that there is no strength in them.

The same difficulty with regard to memory naturally arises from the system of ideas; and the only reason why it was not observed by Philosophers, is, because they give less attention to the memory than to the senses: For since ideas are things present, how can we, from our having a certain idea presently in our mind, conclude that an event really happened ten or twenty years ago corresponding to it?

There is the same need of arguments to prove, that the ideas of memory are pictures of things that really did happen, as that th ideas of sense are pictures of external objects which now exist. In both cases, it will be impossible to find any argument that has real weight. So that this hypothesis leads us to absolute scepticism, with regard to those things

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which we moſt diſtinctly remember, no leſs than with regard to the external objects of ſenſe.

It does not appear to have occurred either to LOCKE or to BERKELEY, that their ſyſtem has the ſame tendency to overturn the teſtimony of memory as the teſtimony of the ſenſes.

Mr. HUME ſaw farther than both, and found this conſequence of the ſyſtem of ideas perfectly correſponding to his aim of eſtabliſhing univerſal ſcepticiſm. His ſyſtem is therefore more conſiſtent than theirs, and the concluſions agree better with the premiſes.

But if we ſhould grant to Mr. HUME, that our ideas of memory afford no juſt ground to believe the paſt exiſtence of things which we remember, it may ſtill be aſked, How it comes to paſs that perception and memory are accompanied with belief, while bare imagination is not? Though this belief cannot be juſtified upon his ſyſtem, it ought to be accounted for as a phænomenon of human nature.

This he has done, by giving us a new theory of belief in general; a theory which ſuits very well with that of ideas, and ſeems to be a natural conſequence of it, and which at the ſame time reconciles all the belief that we find in human nature to perfect ſcepticiſm.

What then is this belief? It muſt either be an idea, or ſome modification of an idea; we conceive many things which we do not believe. The idea of an object is the ſame whether we believe it to exiſt, or barely conceive it. The belief adds no new idea to the conception; it is therefore nothing but a modification of the idea of the thing believed, or a different manner of conceiving it. Hear himſelf:

" All

" All the perceptions of the mind are of " two kinds, impreſſions and ideas, which " differ from each other only in their different " degrees of force and vivacity. Our ideas " are copied from our impreſſions, and repre- " ſent them in all their parts. When you " would vary the idea of a particular object, " you can only increaſe or diminiſh its force " and vivacity: If you make any other change " upon it, it repreſents a different object " or impreſſion. The caſe is the ſame as " in colours. A particular ſhade of any " colour may acquire a new degree of live- " lineſs or brightneſs, without any other " variation: But when you produce any " other variation, it is no longer the ſame " ſhade or colour. So that as belief does " nothing but vary the manner in which " we conceive any object, it can only be- " ſtow on our ideas an additional force " and vivacity. An opinion, therefore, or " belief, may be moſt accurately defined a " lively idea, related to or aſſociated with " a preſent impreſſion."

This theory of belief is very fruitful of conſequences, which Mr. HUME traces with his uſual acuteneſs, and brings into the ſervice of his ſyſtem. A great part of his ſyſtem indeed is built upon it; and it is of itſelf ſufficient to prove what he calls his hypotheſis, " that belief is more properly an act of the ſenſitive than of the cogitative part of our natures."

It is very difficult to examine this account of belief with the ſame gravity with which it is propoſed. It puts one in mind of the ingenious account given by MARTINUS SCRIBLERUS of

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the power of ſyllogiſm, by making the *major* the male, and the *minor* the female, which being coupled by the middle *term*, generate the concluſion. There is ſurely no ſcience in which men of great parts and ingenuity have fallen into ſuch groſs abſurdities as in treating of the powers of the mind. I cannot help thinking, that never any thing more abſurd was gravely maintained by any Philoſopher, than this account of the nature of belief, and of the diſtinction of perception, memory, and imagination.

The belief of a propoſition is an operation of mind of which every man is conſcious, and what it is he underſtands perfectly, though, on account of its ſimplicity, he cannot give a logical definition of it. If he compares it with ſtrength or vivacity of his ideas, or with any modification of ideas, they are ſo far from appearing to be one and the ſame, that they have not the leaſt ſimilitude.

That a ſtrong belief and a weak belief differ only in degree, I can eaſily comprehend; but that belief and no belief ſhould differ only in degree, no man can believe who underſtands what he ſpeaks: For this is in reality to ſay that ſomething and nothing differ only in degree, or that nothing is a degree of ſomething.

Every propoſition that may be the object of belief, has a contrary propoſition that may be the object of a contrary belief. The ideas of both, according to Mr. HUME, are the ſame, and differ only in degrees of vivacity. That is, contraries differ only in degree; and ſo pleaſure may be a degree of pain, and hatred a degree of love. But it is to no purpoſe to trace the abſurdities

abſurdities that follow from this doctrine, for none of them can be more abſurd than the doctrine itſelf.

Every man knows perfectly what it is to ſee an object with his eyes, what it is to remember a paſt event, and what it is to conceive a thing which has no exiſtence. That theſe are quite different operations of his mind, he is as certain as that ſound differs from colour, and both from taſte; and I can as eaſily believe that ſound, and colour, and taſte, differ only in degree, as that ſeeing, and remembering, and imagining, differ only in degree.

Mr. HUME, in the third volume of his Treatiſe of Human Nature, is ſenſible that his theory of belief is liable to ſtrong objections, and ſeems, in ſome meaſure, to retract it; but in what meaſure, it is not eaſy to ſay. He ſeems ſtill to think that belief is only a modification of the idea, but that vivacity is not a proper term to expreſs that modification. Inſtead of it he uſes ſome analogical phraſes to explain that modification, ſuch as "apprehending the idea more ſtrongly, or taking faſter hold of it."

There is nothing more meritorious in a Philoſopher than to retract an error upon conviction; but in this inſtance I humbly apprehend Mr. HUME claims that merit upon too ſlight a ground: For I cannot perceive that the apprehending an idea more ſtrongly, or taking faſter hold of it, expreſſes any other modification of the idea than what was before expreſſed by its ſtrength and vivacity, or even that it expreſſes the ſame modification more properly. Whatever modification of the idea he makes belief

to

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to be, whether its vivacity, or ſome other without a name, to make perception, memory, and imagination, to be the different degrees of that modification, is chargeable with the abſurdities we have mentioned.

Before we leave this ſubject of memory, it is proper to take notice of a diſtinction which ARISTOTLE makes between memory and reminiſcence, becauſe the diſtinction has a real foundation in nature, though in our language I think we do not diſtinguiſh them by different names.

Memory is a kind of habit which is not always in exerciſe with regard to things we remember, but is ready to ſuggeſt them when there is occaſion. The moſt perfect degree of this habit is, when the thing preſents itſelf to our remembrance ſpontaneouſly, and without labour, as often as there is occaſion. A ſecond degree is, when the thing is forgot for a longer or a ſhorter time, even when there is occaſion to remember it, yet at laſt ſome incident brings it to mind without any ſearch. A third degree is, when we caſt about and ſearch for what we would remember, and ſo at laſt find it out. It is this laſt, I think, which ARISTOTLE calls reminiſcence, as diſtinguiſhed from memory.

Reminiſcence, therefore, includes a will to recollect ſomething paſt, and a ſearch for it. But here a difficulty occurs. It may be ſaid, that what we will to remember we muſt conceive, as there can be no will without a conception of the thing willed. A will to remember a thing, therefore, ſeems to imply that we remember it already, and have no occaſion to ſearch

ſearch for it. But this difficulty is eaſily removed. When we will to remember a thing, we muſt remember ſomething relating to it, which gives us a relative conception of it; but we may, at the ſame time, have no conception what the thing is, but only what relation it bears to ſomething elſe. Thus, I remember that a friend charged me with a commiſſion to be executed at ſuch a place; but I have forgot what the commiſſion was. By applying my thought to what I remember concerning it, that it was given by ſuch a perſon, upon ſuch an occaſion, in conſequence of ſuch a converſation, I am led, in a train of thought, to the very thing I had forgot, and recollect diſtinctly what the commiſſion was.

ARISTOTLE ſays, that brutes have not reminiſcence, and this I think is probable; but, ſays he, they have memory. It cannot, indeed, be doubted but they have ſomething very like to it, and in ſome inſtances in a very great degree. A dog knows his maſter after long abſence. A horſe will trace back a road he has once gone as accurately as a man; and this is the more ſtrange, that the train of thought which he had in going muſt be reverſed in his return. It is very like to ſome prodigious memories we read of, where a perſon, upon hearing an hundred names or unconnected words pronounced, can begin at the laſt, and go backwards to the firſt, without loſing or miſplacing one. Brutes certainly may learn much from experience, which ſeems to imply memory.

Yet I ſee no reaſon to think that brutes meaſure time as men do, by days, months, or years, or

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or that they have any distinct knowledge of the interval between things which they remember, or of their distance from the present moment. If we could not record transactions according to their dates, human memory would be something very different from what it is, and perhaps resemble more the memory of brutes.

END OF THE FIRST VOLUME.